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LOGAN WALLER PAGE, Director

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THE RESULTS OF PHYSICAL TESTS OF ROAD-BUILDING ROCK.

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CONTENTS.

INTRODUCTION.

The purpose of this bulletin is to furnish highway engineers with the results of physical tests of road-building rock made in the laboratories of the United States Office of Public Roads and Rural Engineering to January 1, 1916. It is proposed to revise this bulletin from time to time, so that additional data secured by the office may become promptly available. Detailed descriptions of the methods of determining the physical properties of road-building rocks have been given in a recent publication by Jackson.[1] Interpretation of the results of these tests has, however, been reserved for publication with the tabulated data here given. It should be noted that Bulletins Nos. 347 and 370 therefore constitute a complete revision of Office of Public Roads Bulletin No. 44, by Albert T. Goldbeck and Frank H. Jackson, Jr., which was published in 1912. As a matter of interest it may be stated that since January 1, 1912, approximately 1,350 additional samples have been classified and tested, raising the total number from the United States and Canada to about 3,650.

[1] United States Department of Agriculture Bulletin No. 347.

AGENCIES CAUSING ROAD DETERIORATION.

Roads may deteriorate from both external and internal causes. The destructive agencies may be classified as mechanical, chemical, and physical, but in some respects it is more convenient to consider deterioration as being due to the effect of (1) traffic, (2) climatic conditions, and (3) faulty construction. The first two are external agencies and the latter is internal.

Traffic.—Traffic divides itself into two classes, (a) horse-drawn vehicles and (b) self-propelled or motor-driven vehicles. In the former the impact of horses' feet tends to disturb the position of individual fragments of rock in the wearing course and also to fracture the rock. At the same time wheels, especially steel-tired wheels, not only exert an abrasive action which grinds away the rock surfaces, but tend to crush the fragments of rock in proportion to the load per unit width of tire.

Automobile traffic exerts a severe shearing action upon the road surface which tends to loosen the individual fragments and, ultimately, to remove them from the road. Where chains or armored tires are used, considerable abrasion may also result, especially under those conditions which favor slipping or skidding.

Climatic agencies.—So far as the rock itself is concerned, climatic or weather conditions are not important destructive agencies. While it is true that rain and surface waters gradually dissolve or react with certain rock-forming minerals, the action is so slow as to be practically negligible as a source of deterioration during the life of a road. Frost may cause some deterioration in the more porous types of rock, but both rain and frost are more destructive to the road structure than to the rock of which it is built. Wind also is a negligible factor so far as the rock is concerned.

Faulty construction.—Faulty construction may result in rapid deterioration of the road proper, due to a number of causes, such as poor drainage, lack of proper consolidation, the use of the wrong size or wrong grading of broken stone, etc. Destruction or disintegration of the fragments of rock may also be hastened by these errors in construction.

FACTORS INFLUENCING THE SELECTION OF ROCK FOR ROAD BUILDING.

In accordance with the preceding discussion it is evident that from the standpoint of destructive agencies traffic conditions are the most important factors to be considered in the selection of rock for road building. Availability as well as relative cost are also important factors in so far as ultimate economy is concerned, but need not be considered in this bulletin. In addition, the type of road to be

constructed is a most important consideration, and in general the selection of rock should be based upon the character and volume of traffic as related to the type of road in which it is to be used.

The more common types of road in which stone is used are:

1. Water-bound broken-stone roads, as macadam, maintained as such.
2. Water-bound macadam roads maintained with dust palliatives.
3. Water-bound macadam roads with bituminous carpet.
4. Bituminous broken-stone roads with a seal coat of bituminous material constructed according to the penetration method.
5. Bituminous concrete roads with a seal coat of bituminous material.
6. Bituminous concrete roads without a seal coat of bituminous material.
7. Portland cement concrete roads with a coarse aggregate of broken stone.
8. Stone-block pavements.

The destructive effect of traffic, both with respect to character and volume, varies to a considerable extent for the different types of road.

PHYSICAL PROPERTIES OF ROAD-BUILDING ROCK.

The success or failure of a rock for road building depends largely upon the extent to which it will resist the destructive influences of traffic. The three most important physical properties are hardness, toughness, and binding power. Hardness is the resistance which the rock offers to the displacement of its surface particles by abrasion; toughness is the resistance which it offers to fracture under impact; and binding power is the ability which the dust from the rock possesses, or develops by contact with water, of binding the large rock fragments together. In order to approximate as closely as possible in the laboratory the destructive effects produced by the various agencies which have been mentioned, certain physical tests have been developed. Brief descriptions of these tests are as follows:

HARDNESS TEST.

Hardness is determined by subjecting a cylindrical rock core 25 mm. in diameter, drilled from the specimen to be examined, to the abrasive action of quartz sand fed upon a revolving steel disk. The end of the specimen is worn away in inverse ratio to its hardness and the amount of loss is expressed in the form of a coefficient as follows:

Coefficient of hardness $= 20 - 1/3$ w, where w equals the loss in weight after 1,000 revolutions of the disk.

TOUGHNESS TEST.

Toughness is determined by subjecting a cylindrical test specimen 25 by 25 millimeters (1 by 1 inch) in size to the impact produced by the fall of a 2-kilogram (4.4-pound) hammer upon a steel plunger whose lower end is spherical and rests upon the test piece. The energy of the blow delivered is increased by increasing the height of fall of the hammer 1 centimeter (0.39 inch) after each blow. The height of blow in centimeters at failure of the specimen is called the toughness.

DEVAL ABRASION TEST.

A test devised by the French for measuring the combined action of abrasion and impact is as follows: Five kilograms (11 pounds) of freshly broken rock between 2 and $2\frac{1}{2}$ inches in size is tested in a special form of cylinder so mounted on a frame that the axis of rotation of the cylinder is inclined at an angle of 30° with the axis of the cylinder itself. The fragments of rock forming the charge are thus thrown from end to end twice during each revolution, causing them to strike and rub against each other and the sides of the cylinder. After 10,000 revolutions the resulting material is screened through a $\frac{1}{16}$-inch sieve and the weight of the material passing is used to calculate the per cent of wear. The French coefficient of wear is calculated from the per cent of wear as follows:

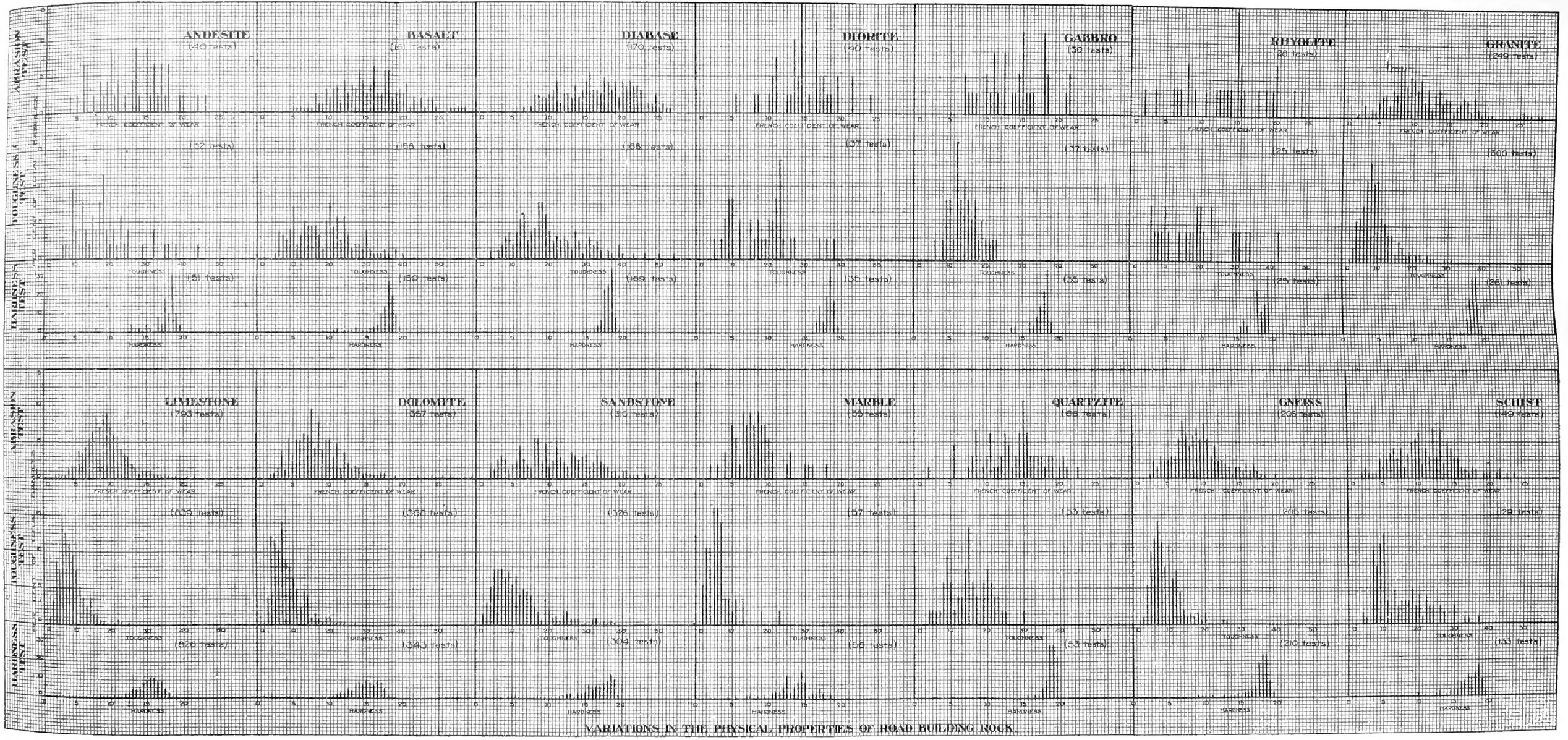
$$\text{French coefficient of wear} = \frac{40}{\text{Per cent wear}}.$$

CEMENTING-VALUE TEST.

To determine the binding power, or cementing value, as it is usually called, 500 grams (1.1 pounds) of the material to be tested is crushed to pea size and ground with water in a ball mill until it has the consistency of a stiff dough. It is then molded into cylindrical briquettes 25 by 25 millimeters (1 by 1 inch) in size, which, after thorough drying, are tested to destruction in a special form of impact machine. A 1-kilogram (2.2-pound) hammer falls through a constant height of 1 centimeter (0.39 inch) upon an intervening plunger, which in turn rests upon the test piece. By means of a suitable arrangement a graphic record of the number of blows required to destroy the specimen is obtained. The number of blows producing failure is called the cementing value of the material.

SPECIFIC GRAVITY—WEIGHT PER CUBIC FOOT—WATER ABSORPTION.

The specific gravity, weight per cubic foot, and the water absorption in pounds per cubic foot are obtained on samples of rock which are tested to determine their road-building qualities. The weight



VARIATIONS IN THE PHYSICAL PROPERTIES OF ROAD BUILDING ROCK.

Chart 1. Department Bulletin 370. (To face page 4.)

per cubic foot is calculated from the specific gravity of the material obtained on a 10-gram sample by the usual displacement method. The gain in weight of this fragment after four days' continuous immersion in water is used to calculate the water absorption in pounds per cubic foot of the solid rock.

VARIATIONS IN RESULTS OF TESTS.

Because of the fact that the various rock families, when subjected to the tests outlined above, give results which are more or less distinctive of a group or type, these results can best be discussed in many cases collectively. There are 14 families of rock which are more or less commonly used in macadam-road construction. The variations which have been found to exist in the three principal tests for each of these are shown in graphic form in the accompanying chart. The values of the tests are arranged as abscissæ, with the zero points to the left and the values numerically increasing toward the right. The ordinates or vertical lines represent the percentages of the total number of samples having values corresponding to the abscissæ on which they are plotted. The figures in parentheses in the upper right-hand corner of each block represent the total number of determinations from which these percentages were calculated.

TRAP-ROCK GROUP.

The first six rock families, *Andesite*, *Basalt*, *Diabase*, *Diorite*, *Gabbro*, and *Rhyolite*, comprise the well-known group of road-building rocks commonly known as "trap." They are all of igneous origin, but are denser and finer grained than the granites, possessing as a rule a peculiar interlocking crystalline structure which imparts to them their distinguishing characteristic—high toughness. Thus, by referring to the chart, it will be noted that the average toughness of all the traps, with the exception of gabbro, which runs somewhat lower, is about 18. This is a considerably higher average than that shown by any of the other types or groups. The same relationship holds true in the abrasion test, the average French coefficient of wear running from about 13 to 15. Comparatively slight variations in hardness are noted for any family or for the group as a whole, the average hardness for which is about 18. The binding power of the traps, as determined by test, varies through wide limits, depending largely on the degree of weathering they have undergone, as shown by Lord.[1] The specific gravity of this group averages about 2.9, giving an average weight per cubic foot of 180 pounds. Individual samples are seldom less than 2.7 nor more than 3.2 specific gravity. Water absorption may vary from a few hundredths of 1 per cent to over 7 per cent.

[1] United States Department of Agriculture Bulletin No. 348.

GRANITES.

Granite, the typical rather coarse-grained igneous rock, is characterized by low toughness and high hardness. The average value for the former, as will be seen from the chart, is about 8, while that for the latter runs as high as for the trap group, about 18.5. The abrasion test develops an average French coefficient of wear of about 11, somewhat lower than for the trap-rock group. Cementing values made on granites run low, as has been demonstrated by experience, the only exceptions being very highly weathered material which usually shows low toughness and resistance to wear. The specific gravity of the granites averages close to 2.7 and is seldom less than 2.6 or more than 2.8. The weight per cubic foot, therefore, averages 168 pounds, and may ordinarily vary from 163 to 175 pounds. Water absorption has been found to run from about 0.04 to 3 per cent.

LIMESTONES AND DOLOMITES.

The limestones and dolomites, or magnesium limestones, are undoubtedly the most widely used road-building rock. It will be seen from the chart that they run much lower in hardness, toughness, and resistance to wear than do the traps or granites. The average French coefficient of wear is about 8, toughness 7, and hardness 15. The cementing values are usually good, about 75 per cent of all samples tested running over 25. The specific gravity of the limestones and dolomites averages close to 2.7, about that of the granites, and is seldom less than 2.6 or more than 2.85. In general, the weight per cubic food will run from 160 to 178 pounds, with an average of about 168 pounds for the limestones and 170 pounds for the dolomite. Absorption may vary from a few hundredths of 1 per cent to over 13 per cent.

SANDSTONES.

The sandstones are characterized by wide variations in the results of all tests. In fact, the highest and lowest values obtained for all samples tested have, with one exception, been upon sandstone. The average French coefficient of wear is about 12, average toughness about 10, and average hardness about 16. The cementing value of sandstones varies widely, depending upon their composition. Thus certain varieties of feldspathic sandstone somewhat resembling trap rock in appearance almost invariably show high binding value in the laboratory. Their specific gravity also varies between wide limits, but usually lies between 2.4 and 2.8, with an average of 2.62. The weight per cubic foot therefore varies from 150 to 175 pounds and averages 164 pounds. Absorption runs from a few hundredths of 1 per cent to about 2 per cent.

MARBLE AND QUARTZITE.

Marble and quartzite are the two families of nonfoliated metamorphic rocks corresponding to limestone and sandstone, respectively. While in some respects it is convenient to consider marble with the limestone and dolomite group, it will be seen from the chart that the average toughness of marble, about 5, is lower, and that the average hardness, which is less than 14, is also somewhat lower. Marbles usually show good cementing value tests with about the same range as the limestones and dolomites. For those samples tested, the specific gravity ordinarily falls between 2.7 and 2.9 and the weight per cubic foot averages 173 pounds, which is somewhat higher than the average for either limestone or dolomite. As would therefore be expected, the maximum absorption is less, being under 2.5 per cent.

Quartzites show an average toughness of 15, as compared with 10 for the sandstones. The coefficient of hardness is also higher and for the samples tested shows a much smaller range of values than for the sandstones. The quartzites invariably show a low cementing value. Their specific gravity from tests made usually lies between 2.6 and 2.8 and their average weight per cubic foot is about 167 pounds. Their water absorption runs from a few hundredths of 1 per cent to nearly 3 per cent.

GNEISS AND SCHIST.

Both gneiss and schist belong to the foliated metamorphic type of rocks. The former is in reality a metamorphosed granite and therefore shows physical properties similar to the granites. The average French coefficient of wear for the gneiss samples is about 9, being somewhat lower than for the granites, while their average hardness and toughness is about the same. Their specific gravity, weight per cubic foot, and absorption are approximately the same as for granite.

The schists show an average French coefficient of wear of about 12. Their average hardness is about 17.5 and their toughness averages 11, the latter being higher than for gneiss. It should be noted, however, that the toughness test for both gneiss and schist is made perpendicular to the plane of foliation. If taken horizontal to the plane of foliation much lower results would be obtained, as failure would then occur along these natural lines of cleavage. The specific gravity of schists usually lies between 2.65 and 2.90 and the average weight per cubic foot is about 181 pounds. Water absorption is seldom over 2 per cent for this family.

With the exception of the highly altered varieties, both gneisses and schists show a rather low cementing value.

CHERT.

Chert is a very hard material, but frequently shows a low resistance to wear, owing to its tendency to fracture along lines which have developed as shrinkage cracks in the rock structure. For this reason it is extremely difficult to test for toughness. The cementing value of pure chert is usually low, but some highly weathered deposits develop in service good cementing value, especially if a high-binding clay is associated with it. Comparatively few samples which have been submitted for examination have been found suitable for all tests. Of those examined, however, the French coefficient of wear has usually been found to lie between 2 and 8, with an average of 5; toughness between 7 and 26, with an average of 16; and the hardness coefficient between 19 and 20. Specific gravity usually lies between 2.4 and 2.65 and the average weight per cubic foot is about 160 pounds. Water absorption may run from a few tenths of 1 per cent to over 8 per cent.

SHALE AND SLATE.

Shales and slates are highly laminated rocks that tend to break into flat plates not suitable for road-building purposes. They are seldom used in road construction, except perhaps as a filling for subfoundations. They vary greatly in nearly all of their physical properties.

RARE ROAD-BUILDING ROCKS.

A comparatively few samples of a number of families of rocks which are occasionally used in road building have been examined in the laboratories of the United States Office of Public Roads and Rural Engineering. They need not be considered in detail, but the usual ranges as well as the averages of results of the more important physical tests of these rocks are given in Table I.

TABLE I.—*The rare road-building rocks.*

Number of samples.	Name.	French coefficient of wear.		Toughness.		Hardness.	
		Ordinary range.	Average.	Ordinary range.	Average.	Ordinary range.	Average.
20	Amphibolite	11.3–26.7	16.7	12–40	19	16.6–19.0	17.5
10	Eclogite	12.7–22.7	16.1	14–28	26	18.4–19.3	18.5
12	Epidosite	10.0–18.7	13.0	10–23	16	17.6–19.5	18.0
11	Felsite	11.9–21.3	15.8		16		18.7
6	Peridotite	7.6–13.2	10.3	9–12	10	13.3–16.6	15.0
8	Serpentine	2.6–14.2	10.1	11–21	14	18.3–18.6	18.4
5	Trachyte	11.5–23.5	16.2	21–34	22	17.7–19.1	18.1
19	Syenite	7.0–18.7	13.1	8–22	14	17.3–19.2	18.1

SLAGS.

Many slag varieties resemble in certain outward respects the common road-building rocks. However, in general, they are more porous and glassy, and vary so greatly in physical properties that with reference to their physical characteristics from the standpoint of road construction they can not well be considered as a single class with definite limits or general average numerical values.

INTERPRETATIONS OF RESULTS OF PHYSICAL TESTS.

The results of physical tests are only of value in predetermining the suitability of a rock for a given type of road under given conditions when the behavior of other rocks, having the same general physical characteristics, is known. Much investigation is still necessary to accurately correlate laboratory tests with service results, but in this connection certain facts have been determined from experience, which may be briefly discussed under the different types of roads.

As the amount of traffic to which a road is or will be subjected is a most important consideration, and as the terms light, moderate, and heavy are commonly used in describing the amount of traffic, such terms should be defined. For the purpose of comparison it has been assumed that traffic of less than 100 vehicles per day is light, between 100 and 250 moderate, and over 250 heavy.

WATER-BOUND MACADAM ROADS.

The ideal rock for the construction of a water-bound macadam road resists the wear of traffic to which it is subjected to just that extent which will supply a sufficient amount of cementitious rock dust to bind or hold the larger fragments in place. It is generally admitted that the ordinary macadam road is not well suited to any considerable amount of automobile traffic, because such traffic rapidly removes the binder without producing fresh material to take its place.

Cementing value is a necessary quality for rocks used in macadam road construction. As determined by test, cementing values below 25 are called low; from 26 to 75, average, and above 75, high. In general, the cementing value should run above 25. For rocks which show a low French coefficient of wear, however, a relatively high cementing value is more necessary than for those which have a high French coefficient. Interpretation of results of the cementing value test is subject to a number of influencing considerations. For instance, it has been found that certain feldspathic varieties of sandstone give excellent results in this test, while experience has shown that they do not bind well when used in the wearing course of macadam roads. In the case also of certain varieties of the trap

group low results are frequently shown by laboratory tests for rocks which bind quite satisfactorily upon the road, provided traffic is sufficiently heavy to supply the requisite amount of fine material. Certain granites, gneisses, and schists which are not suitable for use as binding material give good results in this test. In such cases it is usually found that the highly altered nature of the material reduces its toughness and resistance to wear to such an extent as to condemn it for use.

Experience has shown that in general the following table of limiting values for the French coefficient of wear, toughness, and hardness may be used in determining the suitability of a rock for the construction of the wearing course of a macadam road:

TABLE II.—*Limiting values of physical tests of rock for water-bound macadam road construction.*

Character of traffic.	Limits of tests.		
	French coefficient of wear.	Toughness.	Hardness.
Light	5–8=(5–8 per cent wear)	5–9	10–17
Moderate	8–15=(2.7–5 per cent wear)	10–18	Over 14
Heavy	Over 15=(less than 2.7 per cent wear)	Over 18	Over 17

With relation to the limitations for hardness it may be noted that as a result of comparing hardness and toughness tests of some 3,000 samples, the authors[1] have shown that when any given value for toughness falls within certain limits which define the suitability of the material for macadam road construction under given traffic conditions, the corresponding value for hardness will fall within similar limits for hardness. In this connection it will be seen, in Table II, that a maximum limit for hardness is only given in the case of light traffic. It has been found that the great majority of samples having a French coefficient of wear of from 5 to 8 and a hardness of over 17 are granites, quartzites, and hard sandstones, which are unsuited for use in the wearing course of water-bound macadam roads due to their lack of binding power.

BITUMINOUS ROADS.

For broken-stone roads which are maintained with dust palliatives, the same limits for French coefficient of wear and toughness should hold as for ordinary macadam roads.

In bituminous work observations indicate that in some cases it is advantageous to use a rock of relatively high absorption rather than one with low absorptive qualities, owing to a better adhesion of the bituminous material by a partial surface impregnation of the rock.

[1] Relation Between the Properties of Hardness and Toughness of Road-Building Rock, Journal of Agricultural Research, Vol. V, No. 19, D–3.

While the binding or cementing value of a rock is a most important consideration from the standpoint of ordinary macadam construction, the same is not true of broken-stone roads which are carpeted or constructed with an adhesive bituminous material. The French coefficient of wear is also of relatively less importance, owing to the fact that the fine mineral particles produced by the abrasion of traffic combine, or should combine, with the bituminous material to form a mastic which is held in place and protects the underlying rock from abrasion so long as by proper maintenance it is kept intact. The toughness of the rock is of more importance, as the shock of impact is to a considerable extent transmitted through the seal coat and may cause the underlying fragments to shatter. It would, therefore, seem that the minimum toughness of a rock for use in the construction of a bituminous broken-stone road or a broken-stone road with a bituminous-mat surface should, for light traffic, be no less than for ordinary macadam subjected to the same class of traffic. For moderate and heavy traffic, however, the same minimum toughness should prove sufficient, owing to the cushioning effect of the bituminous matrix. No maximum limit of toughness need be considered for any traffic.

In the case of bituminous concrete roads, where the broken stone and bituminous material are mixed prior to laying and consolidation, it generally appears advisable to set a minimum toughness of 6 or 7 for light-traffic roads, instead of 5, in order to insure that the fragments of rock which have been coated with bitumen shall not be fractured under the roller during consolidation; and 12 or 13 for moderate and heavy traffic, instead of 10 and 19, as in the case of water-bound macadam roads.

Bearing in mind the fact that availability, cost, and various local conditions may often modify the selection of proper limits, Table III may be used as a general guide for minimum limits of French coefficient of wear and toughness in connection with bituminous broken-stone roads.

TABLE III.—*Minimum limits of physical tests of rock for bituminous-road construction.*

Type of road.	Light to moderate traffic.		Moderate to heavy traffic.	
	French coefficient of wear.	Toughness.	French coefficient of wear.	Toughness.
Broken stone with bituminous carpet. Bituminous broken stone with seal coat.	5=(not over 8 per cent wear).	5	7=(not over 5.7 per cent wear).	10
Bituminous concrete with or without seal coat.	7=(not over 5.7 per cent wear).	7	10=(not over 4 per cent wear).	13

PORTLAND CEMENT CONCRETE AND STONE BLOCK.

The most desirable limitations for broken stone to be used as coarse aggregate in Portland cement concrete wearing surfaces has not as yet been ascertained. In general, however, it would seem that the low limit for hardness should be no less than the hardness of the mortar which binds the rock fragments together. At the present time a minimum hardness of 12 for moderate and 16 for heavy traffic would appear reasonable. In consideration of the type of traffic to which concrete roads are subjected, a minimum toughness of 8 is suggested.

Stone blocks are usually manufactured from granite or sandstone, although other rocks may also be used. Specifications for granite block adopted in 1914 by the American Society of Municipal Improvements[1] call for a toughness of not less than 9 and a crushing strength of not less than 20,000 pounds per square inch. It would appear wise to also require that the hardness be not less than 16.

APPENDIX.

The results of all of the physical tests made on rock samples in the laboratory of the Office of Public Roads and Rural Engineering from the date of its installation in 1902 up to January 1, 1916, are included in Table V, together with the results obtained by Logan Waller Page for the Massachusetts State Highway Commission previous to 1902.

The rocks are classified according to their location, so that this table shows the availability and character of the materials, as far as they have been tested, throughout the United States.

Table IV shows the number of samples of material tested in the different States.

TABLE IV.—*Geographical distribution of samples tested.*

State.	Number of samples tested.	State.	Number of samples tested.	State.	Number of samples tested.
Alabama	29	Massachusetts	179	South Dakota	11
Arizona	3	Michigan	84	Tennessee	61
Arkansas	14	Minnesota	16	Texas	62
California	101	Mississippi	11	Utah	13
Colorado	21	Missouri	33	Vermont	32
Connecticut	43	Montana	4	Virginia	404
Delaware	30	Nebraska	11	Washington	212
Florida	9	New Hampshire	22	West Virginia	139
Georgia	157	New Jersey	72	Wisconsin	139
Idaho	9	New York	136	Wyoming	3
Illinois	122	North Carolina	137		
Indiana	151	Ohio	138		3,605
Iowa	23	Oklahoma	50	Canada	49
Kansas	11	Oregon	14	Porto Rico	12
Kentucky	41	Pennsylvania	599	Cuba	4
Louisiana	7	Rhode Island	38		
Maine	72	South Carolina	26	Total	3,670
Maryland	116				

[1] Proceedings of the 1914 Convention of the American Society of Municipal Improvements, p. 511.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916.*

ALABAMA.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
1108	Francis	Calhoun	Chert	153	1.74	9.0	4.4	19.3	11	22
1478	Anniston	do	Limestone	168	.27	3.9	10.3	15.2	9	62
4382	do	do	Quartzite	165	.20	3.4	11.7	19.7	21	2
2450	Cullman	Cullman	Sandstone	153	.94	4.8	8.3	15.1	10	37
7587	do	do	do	156	.97	9.2	4.4	18.5	6	4
7588	do	do	do	159	.11	6.6	6.1	17.8	6	5
7786	do	do	Feldspathic sandstone	156	2.00	8.6	4.7	15.6	7	33
2451	do	do	Limestone	168	.55	3.4	11.6	15.1	8	37
2856	do	do	do	165	.62	6.8	5.8	12.9	6	36
5054	Selma	Dallas	do	165	1.56	7.8	5.1	15.0	7	25
7031	Gadsden	Etowah	do	168	.31	4.7	8.5	15.4	4	15
805	Berry	Fayette	do	168	.34	3.1	13.0	[1]	[1]	[1]
426	Farmsdale	Hall	do	162	2.56	17.4	2.3	[1]	[1]	20
391	Birmingham	Jefferson	Chert	162	1.28	10.2	3.9	[1]	[1]	[1]
392	do	do	do	159	2.24	8.2	4.9	[1]	[1]	[1]
393	do	do	do	153	3.40	9.5	4.2	[1]	[1]	58
966	Leeds	do	do	162	.64	15.8	2.5	[1]	[1]	14
395	Birmingham	do	Blast-furnace slag	168	.54	7.6	5.2	[1]	[1]	262
2493	do	do	Slag	159	1.32	9.9	4.0	14.2	6	24
8879	do	do	Blast-furnace slag	156	2.73	10.1	4.0	15.7	6	81
8880	do	do	do	175	.68	[1]	[1]	17.0	6	49
442	do	do	Dolomite	168	1.24	5.7	7.1	[1]	[1]	[1]
1517	do	do	Limestone	159	2.91	6.5	6.1	15.4	10	129
6856	New Decatur	Morgan	Crystalline limestone	172	.95	3.9	10.2	15.4	7	106
7937	Leeds	St. Clair	Weathered chert	143	.54	13.8	2.9	[1]	[1]	13
2854	Dorville Switch	Tuscaloosa	Limestone	168	.10	4.6	8.8	17.7	8	57
1575	Furman	Wilcox	do	162	2.76	4.8	8.4	10.3	7	55
1580	Snowhill	do	do	162	2.57	4.5	8.9	17.1	8	68
1643	Pineapple	do	do	156	4.89	5.3	7.5	11.0	6	65

ARIZONA.

7837	[2]	Cochise	Limestone	168	0.41	5.3	7.6	18.1	6	43
4408	Phoenix	Maricopa	Schist	187	.31	3.1	12.9	17.5	14	54
4103	U. S. Government	do	Altered andesite	162	1.95	2.4	16.5	17.6	23	500

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

ARKANSAS.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
4754	Herber Springs	Cleburne	Slate	168	0.72	5.6	7.1	9.3	16	21
5680	(1)	do	Argillaceous sandstone	168	1.35	3.6	11.2	11.4	19	117
5403	Van Buren	Crawford	Feldspathic sandstone	162	.87	4.5	8.9	15.2	10	34
8921	Alma	do	Sandstone	165	.79	2.3	17.0	18.3	10	8
2846	Conway	Faulkner	Ferruginous sandstone	159	1.63	4.9	8.1	17.1	9	23
438	Hot Springs	Garland	Chert	162	.46	11.1	3.6	(2)	(2)	(2)
7629	Hope	Hempstead	Ferruginous sandstone	184	1.54	6.9	5.8	18.2	12	32
2298	Paris	Logan	Feldspathic sandstone	159	1.27	2.4	16.9	18.9	10	77
1353	Texarkana	Miller	Ferruginous sandstone	178	2.28	4.6	8.6	18.2	16	26
2158	Little Rock	Pulaski	Feldspathic sandstone	175	.25	2.3	17.4	18.9	37	41
742	Fort Smith	Sebastian	Sandstone	156	1.39	4.0	10.1	(2)	(2)	70
743	do	do	do	162	1.28	3.7	10.7	(2)	(2)	50
6331	Bald Knob	White	do	159	2.05	2.2	18.2	17.9	18	41
6954	(1)	Yell	Quartzite	165	.54	2.7	14.8	19.0	22	8

CALIFORNIA.

1227	Oakland	Alameda	Rhyolite (altered)	165	0.36	1.7	23.0	18.7	33	37
5150	do	do	Altered rhyolite	168	.50	2.7	14.8	17.9	14	25
4372	do	do	Feldspathic sandstone	168	.48	4.7	8.5	16.5	5	177
4373	do	do	do	168	.51	3.6	11.2	18.6	21	39
4374	do	do	do	168	.44	3.0	13.4	18.8	24	13
4377	do	do	do	168	.41	3.5	11.4	17.8	12	68
5151	do	do	do	168	.48	2.2	18.0	18.7	14	94
4376	do	do	Altered basalt	178	1.43	5.3	7.5	16.8	15	130
4375	do	do	Quartz breccia	162	1.80	10.5	3.8	19.4	9	18
8892	Newark	do	Chalcedonic quartz	165	.35	8.5	4.7	(2)	(2)	8
9369	Dumbarton	do	Ferruginous chert	184	.14	15.9	2.5	(2)	(2)	33
8891	Newark	do	Serpentine	156	4.04	11.0	3.6	12.3	6	86
9370	Dumbarton	do	do	147	2.73	16.4	2.4	14.0	(2)	49
9371	do	do	Chert conglomerate	165	.05	7.1	5.6	(2)	(2)	5
2031	Milton (5 miles east of)	Calaveras	Rhyolite	168	.19	2.1	19.0	19.5	20	17
2032	Milton (3 miles east of)	do	Altered basalt	181	.58	1.5	27.4	19.2	19	42
2636	Milton	do	Altered andesite	178	.11	1.5	26.0	18.8	44	32
2350	Valley Springs (near)	do	Quartzite	178	.41	3.4	11.8	19.5	15	3
2351	do	do	Hornblende chlorite schist	178	.84	2.8	14.4	18.9	17	29

5147	San Pablo	Contra Costa	Feldspathic sandstone	168	.55	2.6	15.2	18.2	16	28
5148	Albany	do	do	168	1.04	5.0	7.9	17.0	11	56
2925	Red Hill	Fresno	Epidosite	187	.22	2.1	18.7	17.6	11	29
7605	Bakersfield	Kern	Diorite	184	.08	3.7	10.8	19.3	36	6
578	Los Angeles	Los Angeles	Granite	162	.91	14.8	2.7	(2)	(2)	28
2436	Claremont	do	do	162	.57	(2)	(2)	18.1	4	22
2438	Glendale	do	Altered granite	165	.99	4.8	8.4	18.5	20	27
3261	(1)	do	Hornblende granite	165	.42	2.5	15.9	19.0	22	2
2289	Spadra	do	Rhyolite	147	1.32	5.6	7.2	18.0	10	44
2353	(1)	do	do	168	.40	2.6	15.2	19.7	21	46
2946	Spadra (near)	do	Weathered trachytic rhyolite	140	5.29	4.4	9.0	16.2	17	191
2947	do	do	Trachytic rhyolite	153	1.49	5.1	7.9	18.7	19	16
3165	(1)	do	Altered rhyolite	134	7.15	6.8	5.9	16.5	9	282
2290	Spadra	do	Andesite	178	.13	2.3	17.2	18.3	12	149
2294	Hollywood	do	do	172	.59	(2)	(2)	18.7	17	108
2334	(1)	do	Augite andesite	165	2.43	3.4	11.9	16.6	18	500+
2439	(1)	do	Andesite	172	.83	2.2	17.9	17.7	29	500+
2594	San Pedro (near)	do	Altered andesite	156	.21	4.8	8.4	(2)	(2)	135
2595	do	do	do	137	6.59	8.1	4.9	12.9	9	27
2983	Los Angeles	do	do	156	1.05	4.0	10.1	17.3	16	500+
3262	(1)	do	do	159	1.67	2.7	15.0	18.2	15	500+
3263	(1)	do	do	147	4.71	4.8	8.4	18.2	10	343
3264	(1)	do	do	159	2.17	(2)	(2)	17.5	14	500+
3346	Los Angeles	do	Hornblende andesite	162	1.07	3.7	10.8	16.9	17	500+
2293	Hollywood	do	Diorite	172	.40	4.8	8.3	18.4	9	22
2335	(1)	do	Limestone	162	1.44	5.8	6.9	14.2	7	71
2433	Los Angeles	do	Tufaceous limestone	162	4.65	3.7	10.8	17.2	10	233
2352	(1)	do	Tremolite schist	181	.33	3.0	13.2	(2)	(2)	15
2596	San Pedro	do	Quartzite schist	165	.19	4.9	8.2	(2)	(2)	7
2354	(1)	do	Quartz syenite	165	.40	2.3	17.2	19.2	21	18
2355	(1)	do	Syenite gneiss	168	.52	2.4	16.7	18.3	12	25
2356	(1)	do	Biotite gneiss	165	1.11	(2)	(2)	18.2	9	39
2437	Glendale	do	do	172	.17	3.2	12.6	18.7	11	32
3166	Los Angeles	do	do	172	.34	3.7	10.7	18.3	10	59
2593	Hollywood (near)	do	Granite breccia	162	1.99	24.6	1.6	(2)	(2)	226
2597	Lancaster (near)	do	Altered trachyte	178	.53	1.7	23.5	17.8	34	60
3164	(1)	do	Basalt	168	1.69	4.0	10.0	18.6	18	119
3871	(1)	do	Feldspar basalt	165	.75	2.8	14.4	18.3	13	35
2657	Jasper Station	Mariposa	Weathered feldspathic quartzite	175	.20	2.0	20.4	18.7	16	24
2658	do	do	do	172	.25	2.4	16.9	18.7	8	31
2377	Riverside	Riverside	Diorite	187	19	1.7	23.8	18.7	34	28
3544	(1)	do	do	175	.18	7.3	5.5	17.1	5	31
2075	Corona	do	Rhyolite	165	.62	2.2	18.0	18.2	20	31
8643	Corono (near)	do	Altered rhyolite	168	.29	1.8	21.7	19.7	24	20
2076	(1)	do	Andesite	172	1.10	3.5	11.3	17.7	16	500+
3135	(1)	do	Hornblende granite	162	.87	2.5	16.1	18.8	16	10
3545	(1)	do	Dolomitic marble	165	.26	6.3	6.4	14.2	5	63
3546	(1)	do	Pyroxene quartzite	196	.31	3.7	10.8	18.4	15	8
2420	Folson	Sacramento	Altered andesite	175	.29	1.4	28.6	19.3	36	19
8300	Fair Oaks	do	Altered basalt	187	.17	1.7	23.5	19.5	37	19

[1] Exact locality not known.

[2] Test not made.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

CALIFORNIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
2288	Colton	San Bernardino	Marble	172	.22	5.8	6.9	14.5	3	28
2434	Barstow	do	do	168	.17	4.4	9.1	14.4	4	48
7426	San Luis Obispo (near)	San Luis Obispo	Feldspathic sandstone	165	2.62	4.7	8.6	15.3	9	102
3085	Rockaway	San Mateo	Limestone	168	.44	4.5	8.9	(1)	(1)	32
4143	Visitacon	do	Feldspathic sandstone	162	1.54	2.5	16.3	14.9	7	44
5152	Rockaway	do	Calcareous chert	165	.25	4.6	8.6	19.0	11	40
1703	Santa Barbara	Santa Barbara	Feldspathic sandstone	156	2.52	7.0	5.7	10.3	5	138
2128	Hope Rancho	do	Limestone	(1)	(1)	3.3	12.0	15.9	12	76
2130	Lomboc	do	Altered chert	(1)	(1)	(1)	(1)	19.7	5	25
2133	Lomboc (near)	do	Chert	(1)	(1)	10.9	3.7	(1)	(1)	97
1004	Saratoga	Santa Clara	Feldspathic sandstone	168	.40	4.9	8.1	17.1	19	46
1025	Palo Alto	do	Feldspar basalt	168	1.18	3.1	12.8	18.6	16	162
1026	do	do	Banded chert	162	.72	23.5	1.7	(1)	(1)	12
2010	do	do	Altered trachyte	175	.66	3.2	12.3	17.7	11	331
8098	Coyote	do	Siliceous limestone	168	1.27	2.3	17.3	16.7	8	75
1750	Montague	Siskiyou	Andesite	150	3.80	6.8	5.9	16.3	10	21
1186	Cordelia (near)	Solano	Olivine basalt	175	.93	2.3	17.7	18.8	30	214
2758	Cordelia	do	do	175	.38	1.7	24.1	18.9	31	16
2759	do	do	do	172	1.72	3.2	12.7	18.5	19	85
5149	Benicia	do	do	172	1.35	3.1	12.9	18.3	30	45
5153	do	do	do	178	1.29	2.0	20.0	18.3	21	31
1187	Cordelia	do	Diorite	187	.35	2.1	19.3	(1)	(1)	29
5079	Petaluma (near)	Sonoma	Andesite tuff	115	12.50	17.4	2.3	5.0	5	111
6576	Petaluma	do	Basalt	181	.89	2.0	19.6	18.2	26	33
1705	Camarillo	Ventura	Andesite	143	5.18	6.1	6.5	7.9	7	500+
2132	do	do	Altered andesite	(1)	(1)	6.1	6.6	13.4	9	500+
2637	Round Mountain	do	Andesite	172	1.27	2.8	14.2	17.8	21	131
2540	Ventura	do	Volcanic breccia	137	8.79	8.8	4.5	12.2	3	500+
2572	do	do	Limestone	168	.47	2.1	18.7	16.0	10	96
2573	Santa Paula Creek	do	Sandstone	162	1.69	2.0	20.2	16.7	17	55
1286	(2)	(2)	Garnetiferous hornblende schist	187	1.19	2.4	16.7	16.4	11	112
2291	(2)	(2)	Argillaceous limestone	156	2.04	4.7	8.4	10.4	8	500+
2292	Hacienda	(2)	do	156	5.04	4.4	9.0	10.4	11	500+

COLORADO.

3113	Boulder	Boulder	Sandstone	146	2.11	5.3	7.6	16.5	7	16
3114	do	do	Augite andesite	175	.52	3.0	13.3	18.3	18	135
3116	(2)	do	Altered andesite	156	2.73	2.6	15.3	18.3	20	73
3294	Crags	do	Altered granite	165	.24	2.4	16.7	18.8	17	13
2196	Silver Cliff	Custer	Rhyolite breccia	134	5.53	7.8	5.1	(1)	(1)	500+
2934	do	do	do	128	6.11	5.6	7.1	15.5	7	500+
4994	Denver	Denver	Slag (smelter)	215	.25	4.3	9.3	(1)	(1)	47
2458	Colorado Springs (near)	El Paso	Trachyte	134	4.21	3.2	12.7	19.1	21	82
1372	Portland	Freemont	Biotite granite	162	.42	8.2	4.9	(1)	(1)	14
1374	do	do	Limestone	162	2.60	4.5	8.8	(1)	(1)	71
396	Lake City	Hinsdale	Rhyolite breccia	156	3.21	5.7	7.0	(1)	(1)	327
397	Sherman	do	Porphyritic granite	162	.44	8.7	4.6	(1)	(1)	(1)
398	Lake Shore post office	do	Rhyolite tuff	175	.15	8.1	5.0	(1)	(1)	(1)
406	do	do	do	156	2.90	10.3	3.8	(1)	(1)	(1)
399	Capitol City (near)	do	Brecciated felsite	156	3.13	3.4	11.9	(1)	(1)	(1)
407	Lake City (near)	do	Andesite	162	2.83	3.5	11.5	(1)	(1)	(1)
408	do	do	Augite andesite	162	2.00	6.4	6.3	(1)	(1)	(1)
409	do	do	Diorite	168	1.03	3.2	12.5	(1)	(1)	(1)
3293	Golden	Jefferson	Basalt	172	1.43	2.2	17.9	15.9	15	222
4724	Fort Collins	Larimer	Limestone	159	3.24	6.5	6.1	(1)	(1)	32
1602	La Junta	Otero	do	153	6.04	7.3	5.5	3.0	7	95

CONNECTICUT.

2798	Danbury	Fairfield	Marble	172	0.39	5.7	7.0	15.2	6	41
3177	Bridgeport	do	Feldspathic quartzite	165	.38	2.2	18.2	18.5	12	15
3178	do	do	Granite gneiss	165	.37	2.4	16.8	18.5	10	35
6111	do	do	do	165	.25	2.5	16.3	18.8	9	15
6112	do	do	Biotite gneiss	162	1.02	3.0	13.3	18.0	11	16
3223	do	do	Diabase	190	.17	3.3	12.0	18.3	30	37
3477	Danbury	do	do	184	.27	1.1	36.4	(1)	(1)	82
233	Rockyhill	Hartford	do	(1)	(1)	2.4	17.0	(1)	(1)	(1)
2250	do	do	Altered diabase	187	.55	1.7	23.8	18.2	24	500+
2381	Canton	do	Gabbroitic diabase	184	1.06	(1)	(1)	18.0	13	50
3320	Rockyhill	do	Altered diabase	184	1.35	1.8	22.7	16.8	22	192
5977	Suffield	do	do	187	.27	1.9	20.8	18.3	33	85
7309	Hartford	do	do	178	1.89	2.1	18.9	17.2	12	200+
4013	Plainville	do	Basalt	184	.30	2.1	19.4	18.1	22	170
2873	New Milford	Litchfield	Hornblende schist	187	.30	3.5	11.4	18.4	6	24
6995	Torrington	do	do	198	.12	3.0	13.3	16.5	8	9
5815	do	do	Granite gneiss	165	.35	(1)	(1)	18.3	11	32
6605	Sharon	do	Siliceous dolomite	178	.56	5.5	7.3	11.3	7	49
6750	Torrington	do	Amphibolite	196	.16	2.3	17.4	16.9	10	16
2241	Middlefield	Middlesex	Diabase	184	1.08	1.7	23.3	16.5	8	500+

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

CONNECTICUT—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
11	Meriden	New Haven	Augite diabase	178	(1)	3.2	12.5	(1)	(1)	(1)
71	do	do	Diabase	(1)	(1)	2.6	15.5	(1)	(1)	(1)
215	Branford	do	do	(1)	(1)	2.2	18.8	(1)	(1)	(1)
349	do	do	do	175	.77	3.5	11.5	(1)	(1)	(1)
467	Meriden	do	do	181	.65	2.4	16.9	(1)	(1)	287
1204	Branford	do	Altered diabase	172	1.03	2.4	16.5	17.6	15	500+
1324	Ansonia	do	Diabase	190	.16	1.8	22.3	17.9	32	154
2249	Meriden	do	Altered diabase	181	.43	1.8	22.2	17.3	17	500+
5002	Branford	do	do	175	.31	3.4	11.8	16.6	8	376
5758	(2)	do	do	184	2.17	2.0	20.4	18.6	23	40
8178	(2)	do	Diabase	184	1.24	2.1	19.0	17.5	19	114
354	Ansonia	do	Basalt	187	.59	2.1	19.2	(1)	(1)	(1)
1323	do	do	Biotite gneiss	168	.40	3.1	12.9	17.6	20	48
2795	Levyard	New London	Hornblende schist	184	.19	3.4	11.8	18.0	18	28
1042	Rockville	Tolland	Diabase	187	.23	2.0	19.6	(1)	(1)	101
1061	do	do	do	187	.18	1.9	21.1	18.7	43	58
940	do	do	Gneiss	168	.25	2.2	18.6	17.7	10	33
953	do	do	Altered biotite gneiss	162	.68	4.7	8.5	16.6	(1)	55
1104	do	do	Gneiss	190	.47	3.4	11.7	17.6	5	38
8177	do	do	Hornblende schist	162	.67	5.2	7.7	19.0	7	46
206	Plainfield	Windham	Diabase	(1)	(1)	1.8	22.2	(1)	(1)	(1)
1615	Willimantic (near)	do	Granite	162	1.03	11.2	3.6	15.8	(1)	30
1616	do	do	Biotite granite	165	1.12	(1)	(1)	13.6	6	29
			DELAWARE.							
858	Greenbank	New Castle	Quartzite	187	.08	2.7	15.1	18.4	30	31
862	do	do	Quartzite (micaceous)	168	.10	2.6	15.2	(1)	(1)	20
864	Wilmington	do	Pyroxene quartzite	190	.12	2.2	18.3	(1)	(1)	13
1364	do	do	do	181	.10	2.1	18.7	18.5	24	7
5711	(2)	do	Feldspathic quartzite	168	.27	2.5	16.3	18.7	21	15
863	Wooddale	do	Hornblende schist	196	.12	3.0	13.6	16.5	18	54
2012	Mill Creek Hundred	do	Biotite schist	168	.83	6.6	6.1	(1)	(1)	75
2029	Wooddale	do	do	175	.39	3.3	12.2	16.8	10	33
2574	do	do	Hornblende schist	196	.23	2.8	14.3	17.4	19	20
3490	Ashland	do	do	187	.19	4.3	9.3	17.2	9	26
3535	Marshallton	do	do	190	.10	5.2	7.7	17.8	11	5

4033	Wooddale	do	Biotite schist	175	.19	4.5	8.8	17.8	10	26
4615	(2)	do	do	175	.43	5.4	7.4	17.2	11	21
5875	Newark	do	Hornblende schist	187	.29	2.6	15.4	17.7	11	40
865	Wooddale	do	Granite	165	.15	3.4	11.9	(1)	(1)	22
2515	do	do	Biotite granite	175	.37	3.9	10.3	17.7	6	34
4032	do	do	do	168	.37	5.1	7.9	18.3	8	17
1363	Wilmington	do	Amphibolite	172	.13	1.0	41.7	18.6	18	14
1365	do	do	Gabbro	187	.16	1.6	25.3	18.2	17	19
3998	(2)	do	Hypersthene gabbro	187	.17	3.7	10.8	18.0	9	18
2347	(2)	do	Limestone	125	9.01	(1)	(1)	16.2	4	(1)
2348	(2)	do	do	125	8.86	(1)	(1)	17.6	6	(1)
3452	(2)	do	Serpentine	147	5.52	15.1	2.6	0.0	3	500+
3533	Hockessin	do	Biotite gneiss	172	.54	12.8	3.1	17.3	7	46
3534	Marshallton	do	Hornblende gneiss	190	.02	5.6	7.2	18.0	12	21
4921	(2)	do	Biotite gneiss	175	.27	4.4	9.2	17.0	7	55
5713	(2)	do	do	172	.19	4.8	8.3	18.0	8	18
8736	Mill Creek Hundred	do	do	175	.24	4.5	8.8	18.2	7	19
8919	Newark (near)	do	do	172	.57	5.0	8.0	15.9	5	21
5712	(2)	do	Dolomitic marble	178	.35	4.2	9.6	14.3	6	31

FLORIDA.

1129	Gainesville	Alachua	Chert	(1)	(1)	13.9	2.9	(1)	(1)	64
3018	Raleigh	do	do	153	1.66	7.1	5.6	(1)	(1)	6
1169	Floral City	Citrus	Siliceous limestone	155	6.93	17.6	2.3	(1)	(1)	230
6858	(2)	do	Limestone	(1)	(1)	(1)	(1)	(1)	3	38
702	Tampa	Hillsborough	Dolomite	162	4.80	18.6	2.2	(1)	(1)	135
6963	do	do	Limestone	156	.21	9.4	4.3	5.6	3	5
5974	Fort Myers	Lee	Shell limestone	153	3.17	13.1	3.0	12.3	6	65
8387	Ocala	Marion	Weathered chert	143	.30	10.9	3.7	18.8	13	10
7218	Live Oak	Suwannee	Limestone	162	1.06	(1)	(1)	12.1	3	37

GEORGIA.

417	(2)	Bartow	Dolomite	181	0.76	8.2	4.9	(1)	(1)	(1)
8692	Cartersville	do	do	178	.18	(1)	(1)	17.5	14	26
9577	Union City	Campbell	Granite	165	.28	3.0	13 3	18.5	6	16
424	Chickamauga Park	Catoosa	Decomposed limestone	168	.13	4.9	8.3	(1)	(1)	(1)
8721	Graysville	do	Siliceous limestone	168	.32	5.5	7.3	14.7	7	30
8708	Summerville	Chatooga	Limestone	168	.27	4.5	8.9	15.7	9	41
9338A	Holton (2 miles north of)	Bibb	Biotite gneiss	(1)	(1)	(1)	(1)	16.2	4	(1)
9338B	do	do	do	165	2.00	5.7	7.0	19.3	4	14
583	Canton	Cherokee	Eclogite	228	.14	2.9	13.8	(1)	(1)	15
9329	Ball Ground	do	Marble	168	.28	7.7	5.2	11.2	2	31
415	(2)	Coweta	Diabase	190	.21	2.3	17.4	(1)	(1)	8

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

GEORGIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
9580	Newman (near)	Coweta	Diabase	190	.36	2.4	17.0	18.7	28	17
9581	do	do	do	190	.40	2.2	18.2	19.3	37	31
421	Lithonia	De Kalb	Acid granite	168	.12	4.8	8.3	(1)	(1)	9
423	Stone Mountain Station	do	do	162	.16	5.3	7.5	(1)	(1)	15
9140	Atlanta	do	Hornblende gneiss	175	.83	5.1	7.9	16.8	6	26
5586	Stone Mountain [2]	do	Muscovite granite	(1)	(1)	(1)	(1)	18.2	9	(1)
9325	Lithonia	do	Granite	165	.14	4.6	8.7	18.5	5	18
9326	do	do	do	165	.36	5.1	7.8	18.3	3	9
9327	do	do	do	165	.24	4.5	8.9	18.8	4	14
9579	Stone Mountain	do	Muscovite granite	165	.25	4.4	9.1	18.5	6	12
416	New Elberton	Elbert	Granite	168	.15	3.0	13.1	(1)	(1)	9
7941	Oglesby	do	Biotite granite	(1)	(1)	(1)	(1)	18.4	9	(1)
8691	Rome	Floyd	Limestone	168	.18	6.1	6.6	15.5	4	48
9307	Atlanta (near)	Fulton	Feldspathic quartzite	165	.34	2.8	14.3	19.0	16	17
9321	do	do	do	162	.51	5.1	7.8	18.5	20	8
9591	do	do	Schistose quartzite	172	.32	3.5	11.4	18.8	11	25
7020	Atlanta (8 miles north of)	do	Sericite schist	168	.24	4.0	10.0	17.8	10	9
9576	Atlanta (near)	do	Biotite schist	168	.58	6.4	6.2	17.7	7	16
9320	do	do	do	175	.26	5.4	7.4	15.5	16	26
9153	do	do	Orthoclase biotite schist	168	.54	3.1	12.9	18.0	14	15
9177	do	do	Biotite schist	168	.71	8.6	4.7	(1)	(1)	12
9178	do	do	Mica schist	168	.49	6.1	6.6	18.3	(1)	14
9180	do	do	Hornblende schist	187	.52	4.3	9.4	17.7	6	19
9182	do	do	Biotite schist	178	.55	4.6	8.7	16.5	9	42
9195	do	do	Hornblende schist	187	.54	5.3	7.5	18.3	10	18
9197	do	do	Hornblende epidote schist	184	.43	6.5	6.2	17.7	15	25
9198	do	do	do	187	.24	5.3	7.6	17.7	9	27
9302	do	do	Biotite schist	168	.47	7.0	5.7	(1)	8	20
9304	do	do	do	168	1.59	7.6	5.3	(1)	(1)	39
9308	do	do	do	172	.26	6.1	6.6	18.3	15	14
9589	do	do	Biotite epidote schist	178	.32	3.5	11.4	18.0	4	26
422	do	do	Hornblende gneiss	187	.98	3.9	10.2	(1)	(1)	(1)
9142	do	do	Hornblende biotite gneiss	172	.54	4.1	9.8	19.0	7	18
9145	do	do	Biotite gneiss	172	.54	4.3	9.3	18.5	9	12
9138	do	do	Granite gneiss	172	.27	2.8	14.3	18.2	7	20
9139	Atlanta	do	do	165	.39	3.2	12.5	18.3	10	18
9141	Atlanta (near)	do	do	165	1.00	4.3	9.3	18.3	5	18
9146	College Park	do	Biotite gneiss	178	.62	10.5	3.8	17.0	4	25
9148	Atlanta (near)	do	do	165	.67	11.8	3.4	(1)	(1)	17

9151	do	do	do	172	.50	5.6	7.1	18.5	6	16
9152	do	do	do	172	.54	3.2	12.5	16.7	6	15
9154	do	do	Granite gneiss	168	.34	3.8	10.5	17.7	7	14
9155	do	do	do	168	.71	4.5	8.9	18.0	7	13
9156	do	do	Biotite gneiss	168	.33	5.7	7.0	18.5	7	13
9157	do	do	do	168	.40	3.4	11.8	18.3	10	13
9175	do	do	do	172	.72	4.2	9.5	18.5	6	20
9176	do	do	Granite gneiss	168	.40	3.3	12.1	18.7	13	18
9179	do	do	do	165	.32	3.2	12.3	18.3	9	14
9181	do	do	do	168	.45	2.9	13.6	18.7	6	13
9185	do	do	Biotite gneiss	168	.29	5.7	7.0	18.6	11	33
9186	Atlanta	do	Granite gneiss	168	.16	5.6	7.1	17.8	11	19
9187	do	do	Hornblende gneiss	175	.30	5.5	7.3	15.8	8	12
9188	do	do	Biotite gneiss	184	.16	5.1	7.8	[1]	[1]	31
9189	Atlanta (near)	do	do	168	.26	3.8	10.5	19.0	12	14
9190	do	do	do	175	.31	7.6	5.3	[1]	[1]	34
9191	do	do	do	168	.23	4.1	9.8	18.5	8	21
9192	do	do	Granite gneiss	168	.41	8.7	4.6	18.0	7	19
9193	do	do	do	165	.72	3.9	10.3	18.5	7	39
9194	Atlanta	do	Sericite gneiss	165	.65	4.8	8.3	18.0	8	15
9196	Atlanta (near)	do	Granite gneiss	165	.36	4.9	8.2	18.0	7	18
9200	Atlanta	do	do	168	.31	3.9	10.2	18.3	11	20
9201	Atlanta (near)	do	do	165	.53	4.4	9.1	[1]	[1]	18
9298	do	do	Biotite gneiss	175	.50	12.9	3.1	17.8	9	24
9299	do	do	do	168	.42	4.3	9.3	17.3	5	22
9300	do	do	do	165	.42	3.7	10.8	17.8	11	15
9303	do	do	Granite gneiss	168	.39	4.8	8.3	[1]	[1]	19
9305	Atlanta	do	Biotite gneiss	172	.31	4.6	8.7	17.5	6	30
9306	Atlanta (near)	do	do	168	.51	3.8	10.5	15.7	9	24
9309	do	do	Hornblende gneiss	172	.16	13.6	2.9	18.2	6	20
9310	Atlanta	do	Granite gneiss	168	.44	6.6	6.1	18.0	7	17
9312	Atlanta (near)	do	Biotite gneiss	168	.25	4.1	9.8	17.7	8	17
9318	do	do	do	168	.49	4.4	9.1	18.8	10	13
9319	do	do	do	175	.54	7.5	5.3	17.5	[1]	16
9322	do	do	do	175	.53	7.4	5.4	17.2	4	36
9323	do	do	do	172	.19	5.6	7.1	17.5	5	26
9324	do	do	do	175	.25	5.0	8.0	17.8	5	23
9584	do	do	do	175	.45	6.9	5.8	18.7	6	23
9588	do	do	Muscovite gneiss	165	.38	6.5	6.2	17.8	8	23
9590	do	do	Granite gneiss	165	.42	4.4	9.1	18.7	7	20
9314	do	do	Biotite gneiss	168	.37	3.7	10.8	17.3	5	23
9137	do	do	Granite	165	.35	4.1	9.8	18.3	6	16
9143	do	do	Biotite granite	172	.39	5.1	7.9	17.7	6	17
9144	do	do	Granite	165	.50	4.8	8.3	18.3	7	14
9147	do	do	Biotite granite	168	.28	7.7	5.5	18.5	7	22
9149	do	do	do	168	.32	8.6	4.7	17.0	4	15
9150	do	do	do	165	.57	7.4	5.3	14.6	5	15
9183	Atlanta	do	Granite	165	.21	3.4	11.8	18.7	16	27
9184	Atlanta (near)	do	Biotite granite	168	.33	4.8	8.3	17.2	5	26
9199	do	do	Muscovite granite	162	.52	7.2	5.6	17.7	5	14

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

GEORGIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
9301	Atlanta (near)	Fulton	Granite porphyry	159	2.39	6.9	5.8	(1)	(1)	68
9311	Atlanta	do	Granite	168	.25	6.8	5.9	17.7	5	12
9313	Atlanta (near)	do	Biotite granite	165	.31	6.8	5.9	18.5	3	15
9315	do	do	Weathered granite	165	1.13	13.4	3.0	14.3	5	21
3092	Atlanta	do	Granite	(1)	(1)	(1)	(1)	18.3	8	(1)
3100	do	do	do	(1)	(1)	(1)	(1)	18.3	8	(1)
9316	Atlanta (near)	do	Biotite granite	168	.38	7.3	5.5	17.3	4	20
9317	do	do	do	165	.60	12.8	3.1	15.0	4	23
9574	do	do	do	165	.68	5.1	7.8	18.7	5	19
9575	do	do	do	165	.43	3.1	12.9	18.5	9	25
9582	do	do	Granite	168	.31	5.0	8.0	19.0	8	20
9583	do	do	Gneissoid granite	162	.53	7.8	5.1	19.0	5	10
9585	do	do	Altered granite porphyry	162	.69	7.9	5.1	(1)	(1)	34
9586	do	do	Biotite granite	168	.62	8.1	4.9	17.7	6	21
9587	do	do	do	168	.28	6.4	6.3	19.0	7	27
38	(2)	Gordon	Chert	(1)	(1)	4.8	8.4	(1)	(1)	(1)
1639	Gainesville	Hall	Dolomitic marble	178	.26	7.0	5.7	13.7	7	57
1640	do	do	do	178	.21	4.1	9.9	9.6	5	27
1641	do	do	do	175	.52	6.7	6.0	13.8	4	38
2469	do	do	Granite gneiss	(1)	(1)	(1)	(1)	19.3	11	10
2470	do	do	do	(1)	(1)	(1)	(1)	18.2	8	11
2471	do	do	Mica schist	(1)	(1)	(1)	(1)	15.5	6	26
9203	Cataula	Harris	Biotite gneiss	172	.27	4.5	8.9	17.8	7	17
9204	do	do	Granite gneiss	165	.26	4.6	8.7	18.7	7	20
9331	Stockbridge (2 miles from)	Henry	Granite	162	.98	2.6	15.3	19.0	7	9
9333	do	do	do	162	.57	6.8	5.9	19.2	6	11
9336	do	do	do	168	.36	6.5	6.2	18.3	4	10
420	Roberts Station	Jones	Diabase	187	.42	2.6	15.2	(1)	(1)	(1)
9328	Harris City (2 miles from)	Merriwether	Granite	162	.31	7.7	5.2	18.0	4	18
9578	Greenville (near)	do	do	165	.47	3.5	11.4	18.7	6	21
8118	Holton (near)	Bibb	Biotite gneiss	168	.26	5.1	7.7	18.0	4	21
9334	Juliette (½ mile north of)	Monroe	Hornblende gneiss	184	.37	6.1	6.5	16.5	4	12
9332	Paehill Quarry	do	Quartzite	168	.39	2.3	17.4	18.0	15	27
9335	do	do	Aplitic granite	165	.23	3.9	10.3	17.8	5	12
9539	Covington (near)	Newton	Biotite granite	162	.89	5.9	6.8	(1)	(1)	12
9540	Oxford (near)	do	Granite	162	.85	9.1	4.4	18.5	4	12
9541	do	do	do	165	.55	8.1	4.9	(1)	(1)	15
9542	Covington	do	Gneissoid granite	165	.63	4.0	10.0	18.2	7	14
9543	Covington (near)	do	Altered rhyolite	162	1.25	10.5	3.8	(1)	(1)	37

9019	Tate	Pickens	Marble	168	.34	10.2	3.9	12.7	4	29
9020	do	do	do	168	.48	(1)	(1)	8.7	4	29
9330	do	do	do	172	.26	12.3	3.1	12.0	4	41
6918	Portland	Polk	Siliceous limestone	172	.19	3.5	11.6	17.1	10	21
8687	Rock Mart	do	Dolomitic limestone	178	.23	3.4	11.6	15.7	10	33
8688	Portland	do	Limestone	172	.26	4.5	9.0	(1)	(1)	45
419	Augusta (near)	Richmond	Granite gneiss	165	.37	2.6	15.4	(1)	(1)	(1)
3733	Conyers	Rockdale	Biotite gneiss	165	.24	4.4	9.1	18.6	9	14
9503	Conyers (near)	do	do	165	.28	5.8	6.9	18.0	4	24
9500	do	do	Granite	165	.40	5.4	7.4	(1)	(1)	15
9501	do	do	Gneissoid granite	165	.51	5.7	7.0	18.0	3	19
9502	do	do	Granite	165	.68	4.7	8.5	18.7	5	11
9504	do	do	do	162	.64	4.5	8.9	18.3	3	11
9505	do	do	do	162	.52	3.7	10.8	18.7	3	9
468	Toccoa	Stevens	Gneiss	162	.18	5.2	7.7	(1)	(1)	(1)
413	(2)	Walker	Limestone	162	3.35	3.8	10.6	(1)	(1)	86
414	(2)	do	Chert	143	3.42	27.9	1.4	(1)	(1)	6
418	(2)	do	do	187	3.70	16.4	2.4	(1)	(1)	(1)

IDAHO.

1261	Boise	Ada	Rhyolite	134	5.87	6.1	6.6	15.3	6	14
1263	do	do	Basalt	172	1.88	7.6	5.3	18.1	9	8
1264	do	do	do	180	1.02	2.7	14.9	14.9	12	500+
6162	Pocatello (2 miles southeast of)	Bannock	Olivine basalt	178	1.44	4.8	8.4	16.3	11	7
6163	Pocatello (7 miles southeast of)	do	Feldspathic sandstone	168	.74	(1)	(1)	16.7	6	9
6164	Pocatello (1 mile southeast of)	do	Feldspathic quartzite	165	.31	3.1	12.7	19.2	9	2
4394	Coeur d'Alene	Kootenai	Basalt	178	.98	2.1	19.0	19.0	32	6
1271	Moscow	Latha	do	153	5.14	7.7	5.2	5.9	6	464
1273	do	do	do	178	1.41	4.6	8.7	(1)	(1)	27

ILLINOIS.

1522	Quincy	Adams	Limestone	165	1.66	7.6	5.3	10.6	6	46
2396	do	do	do	168	1.01	6.0	6.6	13.2	6	37
2397	do	do	Limestone and chert	168	.51	5.3	7.8	12.7	5	67
437	Elco	Alexander	Chert	156	3.30	5.9	6.8	(1)	(1)	12
584	do	do	do	150	4.13	2.7	14.6	(1)	(1)	5
1443	Ullin (near)	do	do	162	.50	5.8	6.9	19.4	7	15
7148	Olive Branch	do	do	150	1.69	12.0	3.3	(1)	(1)	(1)
7213	Brookville (near)	Ogle	Argillaceous dolomite	172	.82	6.4	6.3	10.6	3	64
7421	do	do	do	165	2.64	5.4	7.4	15.0	7	105
7422	do	do	do	165	3.45	6.1	6.6	14.2	5	67
7423	do	do	do	165	2.70	5.2	7.6	13.6	7	74
2391	Marshall	Clark	Limestone	165	.91	3.7	10.8	14.8	5	31

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

ILLINOIS—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
2392	Casey	Clark	Limestone	168	.68	5.2	7.7	15.7	4	33
5846	do	do	do	168	.64	4.8	8.3	15.0	8	49
4422	Embarras	Coles	do	168	1.42	4.2	9.5	14.2	6	40
7615	Loxa	do	Argillaceous limestone	168	.43	4.8	8.3	15.0	7	38
716	Chicago	Cook	Dolomite	168	.58	4.4	9.1	(1)	(1)	30
756	do	do	do	168	.86	5.8	6.9	(1)	(1)	(1)
4126	(2)	do	do	172	.84	6.0	6.6	15.1	8	34
5509	Thornton	do	do	162	2.15	4.9	8.2	13.5	7	16
5755	do	do	Siliceous dolomite	156	4.44	5.3	7.5	13.0	6	128
6053	do	do	Dolomite	172	1.02	6.1	6.6	12.7	7	24
7737	(2)	do	do	168	.88	5.1	7.9	16.0	11	26
7739	Bellewood	do	Argillaceous dolomite	168	2.11	4.5	8.9	15.8	9	37
7754	Thornton	do	Dolomite	168	1.68	4.5	8.9	13.9	10	27
7768	Chicago	do	do	172	.76	4.8	8.3	15.8	10	40
7733	do	do	do	168	.99	4.2	9.5	13.8	7	34
8069	La Grange	do	do	168	1.59	6.5	6.1	16.0	6	32
8147	(2)	do	do	162	1.53	4.9	8.1	13.0	6	46
8711	Hillside	do	Argillaceous dolomite	162	3.97	4.2	9.5	14.7	4	110
2165	Chicago	do	Blast-furnace slag	(1)	(1)	12.7	3.1	15.8	4	33
2166	do	do	do	(1)	(1)	12.7	3.1	14.8	3	156
2167	do	do	do	(1)	(1)	9.4	4.3	15.0	8	11
2316	do	do	Slag	178	.33	13.5	3.0	17.5	(1)	16
8097	(2)	do	Limestone	168	.56	4.7	8.5	6.5	4	52
5929	Chicago	do	Altered andesite	(1)	(1)	(1)	(1)	18.1	16	(1)
2678	Naperville	Dupage	Dolomite	162	1.64	9.1	4.4	14.2	6	32
5798	Elmhurst	do	Argillaceous dolomite	165	.34	4.6	8.7	17.0	8	40
2389	Paris	Edgar	Limestone	168	1.02	5.4	7.4	13.7	7	34
2390	do	do	do	165	.88	5.3	7.5	15.2	6	35
2424	Cherrypoint	do	do	168	.69	6.6	6.0	15.7	4	30
6370	Gillmore	Effingham	do	168	.67	9.2	4.3	16.0	8	36
2401	Pontoosuc	Hancock	Argillaceous limestone	159	4.89	8.0	5.0	8.7	4	40
2402	Hamilton	do	Limestone	159	3.71	6.5	6.2	17.2	5	61
2400	Gladstone	Henderson	do	162	1.36	9.1	4.4	9.7	5	42
3258	Biggsville	do	do	162	2.45	4.9	8.2	18.1	6	67
9228	Grafton	Jersey	Argillaceous dolomite	159	3.68	6.1	6.6	12.5	5	26
9229	do	do	do	156	2.07	7.7	5.2	12.7	4	25
9230	do	do	do	162	1.83	7.1	5.6	16.5	4	14
452	(2)	Jo Daviess	Limestone	168	1.80	13.1	3.0	(1)	(1)	(1)
4660	Tunnell Hill	Johnson	Sandstone	150	2.92	4.4	9.1	15.9	6	(1)
6598	Vienna (near)	do	Argillaceous limestone	165	.73	3.8	10.5	17.8	20	73

7007	Whitehill	do	Fossiliferous limestone	168	.34	6.8	5.9	13.9	4	51
7509	Reevesville	do	Argillaceous limestone	168	.27	5.1	7.8	15.7	6	79
7510	do	do	do	168	.34	4.1	9.7	16.3	6	55
7617	Cypress	do	do	168	.59	3.9	10.2	15.2	7	21
2638	Batavia	Kane	Limestone	172	1.06	4.9	8.2	13.1	7	49
2543	Aurora	do	Slag	215	.62	2.7	14.6	18.0	20	4
8464	do	do	Smelter slag	218	.47	2.8	14.2	18.0	15	5
5096	Batavia	do	Dolomite	165	3.14	6.3	6.4	12.1	9	26
5097	do	do	do	165	3.44	5.3	7.5	13.9	8	32
5098	do	do	do	168	2.44	4.3	9.4	15.4	9	29
7558	Elgin	do	do	172	1.61	4.3	9.3	16.0	16	39
4764	Kankakee	Kankakee	do	168	2.48	4.4	9.2	12.9	7	(1)
5550	do	do	do	165	2.30	6.9	5.8	13.3	5	20
6088	do	do	Argillaceous dolomite	172	1.56	4.5	8.9	15.2	9	12
6165	do	do	Dolomite	162	3.71	5.7	7.0	13.0	4	14
6443	do	do	Argillaceous dolomite	168	2.97	9.0	4.4	11.7	5	33
6865	do	do	Dolomite	162	1.73	6.0	6.7	13.8	4	57
7023	do	do	do	159	2.24	7.2	5.6	9.0	4	28
7025	Lehigh (near)	do	Argillaceous dolomite	165	3.28	5.3	7.5	9.2	6	22
7026	Tucker (near)	do	Dolomite	170	1.04	7.7	5.2	14.2	8	9
7027	Monteno (near)	do	do	172	.84	7.2	5.6	14.0	4	17
7028	Kankakee	do	do	162	1.29	6.5	6.2	9.5	4	40
7029	Bonfield	do	do	168	2.76	5.2	7.7	13.2	7	17
7071	Kankakee	do	do	165	2.82	6.0	6.7	11.3	4	32
7072	do	do	do	165	3.31	6.8	5.9	10.7	5	25
7298	do	do	Argillaceous dolomite	168	1.89	4.8	8.3	14.3	10	44
7299	do	do	do	165	3.23	4.9	8.1	13.9	7	38
7300	do	do	do	168	7.00	4.5	8.8	14.5	6	58
7301	do	do	Dolomite	162	2.28	5.5	7.3	14.3	8	42
7302	do	do	do	162	1.86	7.0	5.7	14.5	7	28
7525	Lehigh	do	Argillaceous dolomite	162	4.98	5.2	7.7	10.8	5	77
7526	do	do	Dolomite	165	3.05	4.2	9.5	13.8	6	43
7736	Kankakee	do	do	168	1.39	4.8	8.4	15.3	9	45
7871	Lehigh	do	Argillaceous dolomite	168	2.25	3.7	10.7	14.7	7	36
787	Streator	Lasalle	Sandstone	159	2.20	21.0	1.9	(1)	(1)	144
5954	Dixon	Lee	Dolomite	172	1.38	4.7	8.4	16.7	4	86
9509	do	do	Argillaceous limestone	168	1.96	8.5	4.7	(1)	(1)	69
4421	Alton	Madison	Limestone	168	.82	5.7	7.1	14.0	7	25
8145	(2)	do	do	168	.77	3.4	11.8	16.0	6	38
8146	(2)	Monroe	do	162	3.42	2.8	14.0	11.8	6	49
3118	Hillsboro	Montgomery	do	172	2.60	6.0	6.7	14.4	6	44
1585	Oregon	Ogle	Chert	150	5.67	17.1	2.3	(1)	(1)	30
2393	Princeville	Peoria	Limestone	165	1.73	4.0	10.1	16.0	5	23
2394	Maxwell	do	do	165	1.48	5.0	8.0	13.5	8	42
2395	do	do	do	162	1.71	5.3	7.6	10.7	6	56
450	Ullin	Pulaski	Siliceous limestone	156	3.79	5.6	7.2	(1)	(1)	(1)
1292	Chester	Randolph	Limestone	168	.79	3.8	10.4	14.0	6	87
1293	do	do	Fossiliferous limestone	159	2.93	4.5	8.8	2.2	4	40
2398	Moline	Rock Island	Limestone	165	.99	5.0	8.0	14.0	6	34
2399	Port Byron	do	Dolomite	175	.83	5.8	6.9	14.3	8	30

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

ILLINOIS—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
770	Smithton	St. Clair	Limestone	168	.30	4.4	9.2	(1)	(1)	(1)
786	do	do	do	168	.17	5.9	6.8	(1)	(1)	88
7214	Columbia	do	do	162	2.56	3.4	11.6	11.9	5	81
7622	Stolle	do	do	168	.28	4.3	9.2	14.7	7	48
7734	East St. Louis	do	do	168	.47	4.3	9.4	14.3	8	23
8148	(2)	do	do	168	.72	3.0	13.2	16.7	6	69
7652	Winchester	Scott	Argillaceous limestone	172	.65	5.6	7.1	14.5	3	20
6083	Kalamazoo	Thornton	Dolomite	165	1.56	5.5	7.3	13.7	5	54
3225	Anna	Union	Limestone	168	.61	4.2	9.5	(1)	(1)	15
5549	do	do	do	168	.42	3.3	12.0	14.3	9	16
7623	do	do	do	165	1.08	5.0	8.1	15.3	5	58
2388	Fairmount	Vermilion	do	165	1.20	5.1	7.9	14.0	8	40
1298	Joliet	Will	Dolomite	168	2.58	4.3	9.4	12.9	6	35
2774	do	do	do	165	1.33	5.8	6.9	15.4	5	27
2775	do	do	do	165	1.75	5.2	7.7	15.0	8	23
2776	do	do	do	172	2.87	4.7	8.4	15.7	9	43
2777	do	do	do	168	2.21	4.7	8.5	14.3	10	74
2773	do	do	Chert	153	3.84	7.1	5.6	19.2	22	16
8075	(2)	(2)	Dolomite	165	.76	10.3	3.9	13.8	6	100
7374	(2)	Cook	Argillaceous dolomite	162	4.65	4.7	8.5	11.3	5	33
			INDIANA.							
1346	Pleasant Mills	Adams	Dolomitic limestone	159	3.56	10.2	3.9	(1)	(1)	22
7744	Fort Wayne	Allen	Hornblende granite	168	.50	2.4	16.7	(1)	(1)	20
1382	Hope	Bartholomew	Limestone	172	1.71	5.9	6.7	10.2	5	41
1384	Burnsville	do	do	165	.97	6.0	6.7	7.3	5	25
1416	Grammer	do	do	159	1.37	6.2	6.5	14.8	8	49
1378	Montpelier	Blackford	Dolomitic limestone	165	2.97	3.7	10.8	15.2	(1)	52
2077	do	do	Dolomite	172	1.19	6.4	6.2	(1)	(1)	28
9342	Hartford	do	Dolomitic limestone	168	2.68	3.3	12.1	14.8	11	16
1206	Delphi	Carroll	Limestone	172	.75	5.1	7.9	15.3	14	42
1344	Washington	do	do	172	.50	8.7	4.6	16.2	21	45
5534	Logansport	Cass	do	168	.40	5.1	7.8	13.8	5	30
2851	do	do	Cherty limestone	168	.20	9.1	4.4	14.0	3	31
3865	do	do	Dolomite	168	.33	4.1	9.8	16.1	9	47

1457	Charlestown	Clark	Limestone	162	1.41	5.6	7.1	12.8	8	52
1490	Jeffersonville	do	Dolomitic limestone	165	1.23	3.4	11.7	12.5	7	91
5418	Milltown	Crawford	Limestone	168	.55	3.6	11.2	12.7	8	99
5986	Marengo	do	do	168	.36	4.9	8.2	15.3	10	57
9136	Milltown	do	do	168	.49	3.9	10.3	13.5	7	26
1468	do	do	Dolomitic limestone	165	.46	3.4	11.6	15.5	8	95
1495	Marengo	do	Limestone	165	1.61	3.7	10.8	15.0	9	53
1417	Dillsboro	Dearborn	do	168	.78	4.8	8.3	15.4	7	100
1418	Weisburg	do	do	168	.62	4.8	8.3	12.1	8	59
1419	Newpoint	Decatur	do	172	.93	3.5	11.3	15.0	10	34
1420	Greensburg	do	do	159	2.99	4.7	8.5	11.3	9	38
1421	do	do	do	168	1.27	4.5	9.0	16.4	8	56
6120	St. Paul	do	Crystalline limestone	168	.88	4.2	9.5	13.2	7	19
3139	do	do	Limestone	168	.86	3.6	11.2	13.8	7	31
3140	do	do	Siliceous limestone	159	3.23	8.3	4.8	[1]	[1]	16
4658	do	do	Limestone	168	1.58	5.1	7.8	14.3	5	[1]
4659	do	do	Dolomitic limestone	168	1.14	4.8	8.3	14.7	6	[1]
4690	Westport	do	do	168	.68	7.4	5.4	13.3	6	[1]
4655	Greensburg	do	Dolomite	175	.74	4.8	8.3	14.9	6	[1]
8271	Muncie	Delaware	do	162	1.51	5.6	7.1	14.6	6	18
2578	do	do	Dolomitic limestone	165	2.06	4.3	9.3	16.3	13	24
1926	Holland	Dubois	Limestone	172	.85	3.9	10.4	15.0	10	119
1927	do	do	do	172	1.79	3.7	10.8	16.0	11	84
1928	Johnsburg	do	do	168	.68	3.5	11.3	15.3	7	70
3086	Jasper (near)	do	do	165	1.60	[1]	[1]	15.0	11	41
3173	[2]	do	do	165	1.21	3.8	10.5	15.0	9	84
1491	Edwardsville (near)	Floyd	do	165	1.32	4.4	9.0	13.0	9	114
1426	Attica (6 miles northeast of)	Fountain	Chert	156	2.83	3.0	13.5	[1]	[1]	115
8214	Veedersburg	do	Argillaceous limestone	165	1.90	3.6	11.1	16.3	7	93
6549	Marion	Grant	do	165	1.45	[1]	[1]	13.0	10	28
1383	do	do	Limestone	159	4.72	5.2	7.8	12.4	15	56
1424	Bloomfield (6 miles northeast of)	Greene	do	168	1.15	3.0	13.2	16.8	10	66
1389	Noblesville	Hamilton	Dolomite	172	1.08	4.9	8.1	17.1	9	26
1487	Corydon (near)	Harrison	Dolomitic limestone	156	1.97	4.5	8.8	17.3	11	131
3446	do	do	Limestone	168	.52	3.7	10.9	16.7	9	39
3447	do	do	Argillaceous dolomite	143	9.40	8.6	4.7	1.8	4	74
1340	Kokomo (near)	Howard	Dolomitic limestone	153	6.50	4.1	9.7	13.8	17	42
1520	do	do	Limestone	153	6.21	4.2	9.6	11.6	8	63
5232	do	do	do	168	.27	5.8	6.9	15.2	6	23
6032	Huntington	Huntington	do	168	.87	6.9	5.8	14.4	8	34
6038	do	do	Cherty limestone	165	1.06	6.0	6.7	15.0	8	39
5951	do	do	Dolomite	162	3.98	5.7	7.0	12.3	6	46
6031	do	do	do	172	.54	6.0	6.7	15.1	8	40
6066	Markle	do	do	168	1.27	14.2	2.8	14.3	5	23
6873	do	do	do	168	.79	6.7	6.0	13.3	6	23
6871	Huntington	do	Siliceous dolomite	165	3.20	4.5	9.0	9.9	8	43
2816	do	do	do	162	4.40	4.6	8.7	12.0	10	151
1388	Rockford	Jackson	do	165	3.29	5.1	7.8	16.8	14	37
1376	Portland	Jay	Dolomite	168	.69	7.0	5.7	13.0	8	45
1414	Hanover	Jefferson	do	159	3.58	12.3	3.2	4.4	7	42
1412	North Madison	do	Limestone	165	3.21	5.2	7.8	12.3	12	53

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

INDIANA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
1413	Deputy	Jefferson	Limestone	168	.43	4.7	8.5	10.9	7	81
4699	....do	....do	....do	168	.46	5.0	8.1	15.3	9	(1)
1458	Hayden	Jennings	....do	168	.93	3.2	12.6	14.9	9	97
1488	Bewersville	....do	Dolomitic limestone	168	.57	3.7	10.9	13.8	8	94
4702	North Vernon	....do	....do	162	3.79	4.4	9.1	14.9	8	(1)
515	Freelandville	Knox	Limestone	172	.65	3.8	10.6	(1)	(1)	42
540	Bicknell	....do	Dolomitic limestone	168	.90	4.0	10.1	(1)	(1)	47
588	Freelandville	....do	Arenaceous dolomite	175	1.26	2.5	16.1	(1)	(1)	179
4197	Mitchell	Lawrence	Argillaceous dolomite	153	5.77	8.1	5.0	2.7	4	75
1423	....do	....do	Limestone	162	1.66	4.6	8.8	13.0	9	26
1489	Williams (near)	....do	Dolomitic limestone	168	.70	4.1	9.7	16.4	8	141
4697	Bedford	....do	Limestone	159	3.08	6.2	6.4	10.3	6	(1)
4698	Lawrenceport	....do	....do	156	2.46	13.3	3.0	5.7	3	(1)
5027	Bedford	....do	....do	156	2.97	6.4	6.2	8.5	4	13
5028	....do	....do	....do	165	.76	4.2	9.5	15.3	9	38
5029	(2)	....do	....do	156	2.42	7.6	5.3	8.3	5	20
1379	Ingalls	Madison	....do	168	.29	5.6	7.2	14.6	5	50
1380	Alexandria	....do	....do	165	1.41	4.3	9.3	11.8	7	28
1381	Frankton	....do	....do	165	1.57	4.4	9.2	14.5	7	29
1714	Ingalls	....do	....do	168	.41	5.8	6.9	14.5	8	92
1715	....do	....do	....do	168	1.35	5.8	6.9	10.7	5	53
8752	Anderson	....do	....do	168	.41	4.5	8.9	17.0	4	39
1459	Sholas (near)	Martin	....do	162	2.00	3.2	12.4	14.9	9	67
994	Peru	Miami	Dolomite	175	.73	5.6	7.1	14.2	14	(1)
1463	Bloomington	Monroe	Limestone	162	2.16	3.5	11.5	15.8	12	74
1464	....do	....do	....do	150	4.44	10.8	3.7	0	4	63
1465	....do	....do	....do	165	3.32	10.6	3.8	3.9	6	49
1466	....do	....do	....do	165	.97	5.3	7.5	9.7	7	62
1467	....do	....do	Dolomitic limestone	165	1.70	3.0	13.4	15.2	13	41
8181	....do	....do	Limestone	168	.49	4.9	8.1	15.2	5	29
9450	Victor	....do	....do	162	1.98	9.9	4.1	11.8	5	(1)
1386	Waveland	Montgomery	....do	160	1.85	3.9	12.2	8.7	5	43
1348	Kentland (near)	Newton	....do	168	.33	4.1	9.7	16.4	12	33
8761	(2)	....do	....do	168	.64	3.8	10.5	14.8	5	25
6454	Petersburg	Pike	Carbonaceous limestone	175	1.43	2.7	15.0	17.2	20	66
2982	....do	....do	Siliceous limestone	165	2.23	4.4	9.0	18.8	6	80
2980	....do	....do	Sandstone, ferruginous	150	3.59	39.0	1.0	0	2	69
2981	....do	....do	Feldspathic sandstone	147	6.28	10.7	3.7	0	5	124
1461	....do	....do	Calcareous shale	172	.81	4.9	8.1	.2	9	71

1409	Rising Sun	Ohio	Limestone	168	.46	5.5	7.3	13.1	9	98
1462	Orleans	Orange	do	159	3.00	4.4	9.1	14.8	5	37
516	Spencer	Owen	do	165	.95	3.5	11.5	(1)	(1)	78
1341	Spencer (near)	do	do	168	.88	3.7	10.9	13.8	17	21
1422	Spencer	do	do	162	3.00	3.4	11.8	9.4	9	45
1493	Mount Vernon	Posey	Dolomitic limestone	168	1.67	3.5	11.3	16.2	15	108
1492	do	do	do	168	.82	1.8	21.7	15.4	8	56
1210	Greencastle	Putnam	Limestone	165	1.12	3.9	10.3	13.9	8	70
1343	Greencastle (near)	do	do	168	.79	3.9	10.3	17.3	11	24
1347	Greencastle	do	do	165	1.53	4.5	8.9	15.5	8	20
2111	do	do	do	168	.79	4.2	9.5	15.0	7	45
2112	do	do	do	168	.70	3.4	11.6	13.0	8	79
3368	do	do	do	168	.59	3.2	12.5	15.8	11	40
1212	Oakalla	do	do	168	.52	3.2	12.5	14.2	12	72
1345	Russellville	do	do	165	.99	4.4	9.0	13.7	9	29
1342	Greencastle	do	do	168	.43	4.3	9.2	12.9	7	22
5869	Ridgeville	Randolph	Dolomite	165	1.77	7.7	5.2	14.3	7	25
1350	do	do	Dolomitic limestone	165	.77	7.2	5.6	7.9	6	19
1659	do	do	Dolomite	168	2.11	8.7	4.6	16.7	9	10
4701	Osgood	Ripley	do	168	.62	5.0	8.0	13.5	7	(1)
4700	Holton	do	Dolomitic limestone	168	.89	4.6	8.6	12.9	6	(1)
5565	do	do	Limestone	168	.64	4.0	10.0	14.2	8	24
5737	Osgood	do	do	168	1.06	8.1	5.0	13.7	9	56
1438	New Salem	Rush	Dolomite	162	2.33	12.7	3.1	13.0	5	24
1410	Rushville	do	Limestone	168	2.18	2.7	14.8	8.6	6	65
1456	Lexington	Scott	do	165	2.27	3.3	12.3	12.2	9	103
2005	Waldron	Shelby	do	162	2.37	4.2	9.5	7.7	5	52
2006	Shelbyville	do	do	162	2.53	5.6	7.2	15.7	11	60
2007	do	do	do	168	1.82	4.0	10.0	11.7	7	60
9135	(2)	Sullivan	Argillaceous limestone	165	1.36	3.8	10.5	15.2	7	38
1411	Soapville	Switzerland	Limestone	168	.80	4.0	10.0	11.1	9	20
1415	Vevay	do	do	168	.57	5.4	7.5	12.8	8	46
1494	Evansville	Vanderburg	Dolomitic limestone	168	1.38	4.0	10.0	15.8	8	52
1349	Wabash	Wabash	Limestone	159	2.43	4.6	8.7	(1)	(1)	40
1390	do	do	do	162	3.29	3.8	10.5	15.3	10	27
1391	do	do	Dolomitic limestone	172	.43	3.3	12.1	16.0	9	21
1647	do	do	Limestone	165	1.10	4.3	9.3	15.0	6	15
4657	do	do	Dolomitic limestone	168	.87	3.9	10.2	14.5	6	(1)
880	Williamsport	Warren	Calcareous sandstone	156	5.10	7.0	5.7	(1)	(1)	142
1460	Boonville	Warrick	Limestone	168	.97	3.3	12.3	17.2	11	126
6773	(2)	Washington	do	162	2.00	5.2	7.7	10.7	7	57
6876	Richmond	Wayne	Argillaceous dolomite	172	1.26	5.7	7.0	15.2	4	41
1385	do	do	Limestone	168	.89	4.5	8.9	15.3	6	28
1377	Bluffton	Wells	Dolomite	172	1.65	6.3	6.3	15.8	13	37
1387	do	do	do	172	.59	5.8	6.9	17.0	8	29
6872	do	do	Argillaceous dolomite	168	1.80	6.9	5.8	16.4	4	27
1469	Monon	White	Dolomitic limestone	168	1.04	(1)	(1)	14.3	9	43
9007	Columbia	Whitley	Limestone	168	.53	5.2	7.7	11.9	4	20
9008	do	do	Argillaceous dolomite	172	1.29	4.6	8.7	17.0	8	35

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

IOWA.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
462	Raymond	Black Hawk	Dolomite	168	0.64	4.5	8.9	(1)	(1)	161
8912	Mason	Cerro Gorda	Limestone	168	.62	6.0	6.7	13.0	2	(1)
8914	....do	....do	....do	165	1.53	5.7	7.1	13.0	3	(1)
8913	....do	....do	Dolomite	175	1.12	3.8	10.5	13.7	6	(1)
455	Peosta	Dubuque	....do	159	3.30	11.6	3.4	(1)	(1)	32
7704	(2)	....do	Argillaceous dolomite	171	1.59	14.6	2.7	13.6	6	42
7855	Farley (near)	....do	....do	168	4.13	11.3	3.5	5.1	4	45
7858	(2)	....do	....do	168	2.10	10.2	3.9	13.7	7	15
7859	Stone City	....do	Dolomite	(1)	(1)	7.6	5.2	(1)	(1)	24
7860	(2)	....do	Argillaceous dolomite	173	.95	5.8	6.9	14.0	5	28
7854	(2)	....do	Argillaceous limestone	168	1.30	13.8	2.9	10.8	4	22
7856	(2)	....do	....do	165	3.10	6.5	6.2	12.0	5	37
7857	(2)	....do	....do	165	2.60	(1)	(1)	5.2	3	36
8922	Dubuque	....do	....do	172	1.57	4.7	8.6	13.7	9	32
5972	Ballenger	Lee	Limestone	162	2.17	5.5	7.3	9.2	4	24
5525	Cedar Rapids	Linn	Dolomitic limestone	172	1.34	6.7	6.0	16.8	11	30
6102	....do	....do	Dolomite	156	3.81	14.9	2.7	(1)	3	17
6103	....do	....do	Limestone	168	1.64	4.6	8.8	10.0	8	18
5973	Peru	Madison	....do	165	1.55	4.6	8.7	15.6	8	29
5526	La Grande	Marshall	....do	165	2.14	4.6	8.7	15.3	6	56
7121	Buffalo	Muscatine	....do	165	2.50	5.1	7.9	7.9	3	45
383	Butterville	Tama	Argillaceous limestone	162	3.23	21.9	1.8	(1)	(1)	(1)
384	Montcur	....do	Dolomitic limestone	162	1.65	6.7	5.9	(1)	(1)	(1)

KANSAS.

1109	Arkansas City	Cowley	Limestone	150	4.07	14.9	2.7	0.0	3	56
1111	....do	....do	....do	153	5.18	(1)	(1)	3.1	3	29
5248	Moline	Elkford	....do	159	1.62	7.2	5.6	10.8	5	23
1765	Oswego	Labette	....do	168	0.73	9.2	4.3	13.3	6	40
4127	(2)	Leavenworth	Quartzite	165	0.33	2.2	18.2	19.3	25	18
4186	Fort Leavenworth	....do	Argillaceous limestone	162	2.38	4.6	8.7	15.1	7	37
4187	....do	....do	Limestone	165	1.20	4.0	10.0	15.6	11	29
2689	Blue Rapids Township	Marshall	....do	156	3.22	6.3	6.4	9.0	4	31
2690	....do	....do	....do	150	5.65	9.6	4.2	15.0	3	34
2691	Stockdale	....do	....do	150	6.18	8.6	4.6	11.7	3	35
9267	Fredonia	Wilson	Argillaceous dolomite	168	1.01	9.0	4.6	12.8	4	12

5748	Glasgow	Barren	Crystalline limestone	168	0.59	3.8	10.4	13.0	5	103
1993	Catlettsburg	Boyd	Sandstone	156	1.77	6.2	6.5	13.2	7	8
461	Cedar Bluff	Caldwell	Dolomitic limestone	137	3.16	4.5	8.9	(1)	(1)	80
5552	Princeton	do	do	168	1.88	5.1	7.9	14.1	12	10
6575	Cedar Bluff	do	Limestone	168	1.11	4.3	9.4	16.1	10	43
7688	do	do	Argillaceous limestone	168	.51	4.7	8.5	15.3	9	32
1631-1	Limestone	Carter	Limestone	165	1.25	(1)	(1)	14.3	7	71
1631-2	do	do	do	165	1.08	(1)	(1)	12.1	6	56
1631-3	do	do	do	165	.20	(1)	(1)	18.2	14	55
5921	do	do	do	165	.75	4.2	9.6	(1)	(1)	26
5922	Carter	do	Siliceous limestone	168	.59	3.3	12.2	14.6	7	27
446	Lexington	Fayette	Limestone	168	.76	6.2	6.4	(1)	(1)	58
447	do	do	do	162	3.54	7.4	5.4	(1)	(1)	56
2452	Eminence	Henry	do	165	.93	6.1	6.5	(1)	(1)	34
2453	do	do	do	168	.88	7.0	5.7	(1)	(1)	39
2409	Norton	Hopkins	Slag	178	.98	9.6	4.2	17.6	10	31
5635	Louisville	Jefferson	Dolomite	172	.17	3.7	10.9	13.9	9	48
6134	Tucker Station	do	Dolomitic marble	172	1.59	3.4	11.7	15.7	11	26
6135	do	do	do	168	1.63	5.2	7.7	14.8	9	33
8334	Tucker	do	Dolomite	165	1.87	5.1	7.8	16.2	11	32
8335	Louisville	do	Argillaceous dolomite	165	3.80	5.0	8.0	8.3	6	18
8336	do	do	Argillaceous limestone	168	.88	4.7	8.5	13.5	7	24
8337	do	do	Limestone	168	1.08	4.1	9.8	15.2	7	34
8338	Seatonsville	do	Argillaceous limestone	168	1.21	5.3	7.5	13.2	7	15
1654	Paintsville	Johnson	Feldspathic sandstone	165	1.56	2.1	18.7	16.7	10	51
8047	(2)	Logan	Limestone	168	.64	7.7	5.2	14.5	6	16
457	Kuttawa	Lyon	Sandstone	150	8.20	17.8	2.2	(1)	(1)	55
4919	Berea	Madison	Dolomite	175	.73	5.7	7.0	15.8	10	55
4983	do	do	Limestone	165	.81	3.9	10.2	16.3	8	35
7180	Mount Sterling	Montgomery	Crystalline limestone	168	.54	6.6	6.0	11.0	6	52
7181	do	do	do	168	.61	8.0	5.0	13.8	8	51
7182	do	do	Siliceous limestone	165	1.24	5.0	8.0	14.2	11	68
7183	do	do	do	165	.85	(1)	(1)	10.0	4	35
7189	do	do	do	168	.78	4.2	9.6	13.0	9	28
7292	do	do	do	165	.90	3.6	11.0	15.3	9	77
7293	do	do	Fossiliferous limestone	168	.61	7.0	5.8	13.3	3	31
7545	Mount Sterling (6 miles south of)	do	Siliceous limestone	165	1.26	3.9	10.4	13.0	9	69
7546	do	do	Argillaceous limestone	168	1.03	6.3	6.4	8.5	6	70
7190	do	do	Siliceous limestone	165	1.38	4.3	9.3	12.4	10	75
1225	Narrows	Ohio	Limestone	168	.42	3.7	10.8	15.0	10	107
3163	Cerulean (1½ miles from)	Trigg	do	168	.65	4.4	9.1	15.5	5	31

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

LOUISIANA.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
7695	(1)	Bossier Parish	Limonite ore	209	4.24	18.2	2.2	(2)	(2)	75
5634A	Shreveport	Caddo Parish	Ferruginous sandstone	159	3.31	13.8	2.9	4.8	4	49
5634B	do	do	do	168	3.06	19.6	2.0	13.8	8	36
4316	Near De Lode Bluffs	Rapides Parish	Quartzite	147	1.53	3.8	10.5	15.3	8	25
6664	Many	Sabine Parish	Siliceous Limestone	165	2.20	4.7	8.6	12.1	10	369
7024	Kentwood	Tangipohoa Parish	Ferruginous limestone	153	3.65	30.3	1.3	14.7	2	76
3736	Winnfield	Winn Parish	Marble	168	.28	7.2	5.6	10.7	5	38

MAINE.

6467	Rumford Junction	Androscoggian	Biotite gneiss	168	0.45	5.7	7.0	17.8	7	82
6469	(1)	do	do	172	.49	5.4	7.4	(2)	(2)	41
2233	Standish	Cumberland	Biotite schist	172	.39	4.0	10.0	10.8	7	26
5766	Westbrook	do	do	172	.32	4.3	9.3	17.0	7	75
2235	Portland	do	Quartzite schist	172	.27	2.6	15.4	17.7	14	48
7572	Freeport	do	Micaceous quartzite	168	.32	6.0	6.7	18.1	7	36
7612	Portland	do	Amphibolite quartzite	172	.27	2.5	16.0	18.4	10	29
2310	Harpswell Center (1 mile south of)	do	Diabase	187	.37	2.1	18.9	18.4	30	82
7552	Portland	do	Altered diabase	178	.79	3.4	11.6	16.6	11	124
6990	Yarmouth	do	Altered diabase porphyry	184	.03	2.4	16.9	16.8	25	52
7577	Falmouth	do	Diabase	187	.27	3.0	13.3	19.0	24	58
7649	Cumberland	do	Altered diabase	184	.45	2.5	15.7	18.4	18	40
2958	Portland	do	Gneiss	165	.65	(2)	(2)	17.8	12	25
3433	Rocky Hill	do	Granite gneiss	165	.36	3.5	11.5	18.7	11	13
4411	Portland	do	Gneiss	165	.63	3.5	11.5	17.3	12	48
5587	Yarmouth	do	Biotite gneiss	172	.17	4.0	10.1	18.7	10	40
7573	Freeport	do	do	168	.64	6.2	6.5	17.7	7	22
7574	Brunswick	do	do	172	.31	6.9	5.8	18.0	7	20
8031	Cumberland	do	do	172	.93	10.7	3.7	16.2	5	27
7566	Falmouth	do	Granite	162	.41	4.9	8.1	18.9	7	5
7567	do	do	Biotite granite	172	.29	3.1	12.9	17.9	14	24
7568	do	do	Granite	162	.42	4.2	9.3	18.7	9	13
7569	Cumberland	do	Biotite granite	168	.37	3.8	10.5	17.8	10	12
7570	Freeport	do	Granite	165	.31	3.4	11.8	18.6	14	16
7571	do	do	do	162	.29	4.5	8.9	18.8	8	21

7578	Yarmouth	do	do	165	.56	6.3	6.4	18.8	6	17
7575	Brunswick	do	Altered granite	162	.47	7.0	5.7	18.1	6	18
7576	do	do	Granite	162	.45	3.9	10.3	18.7	7	34
8505	Yarmouth	do	do	165	.33	3.4	11.8	19.0	6	19
5310	Portland	do	Basalt	184	.22	3.0	13.3	18.1	29	23
2313	North Jay	Franklin	Granite	165	.39	2.3	17.4	(2)	(2)	16
2303	South Brooksville	Hancock	Altered rhyolite	175	.77	3.3	12.2	18.1	9	201
2304	do	do	Altered andesite	184	.22	2.1	19.4	16.5	15	33
7438	Swans Island	do	Biotite granite	162	.45	5.0	8.0	18.8	8	10
2312	Hallowell	Kennebec	Granite	159	1.72	3.1	12.7	18.7	9	27
5843	Augusta	do	Biotite granite	168	.30	5.0	8.1	19.1	8	25
5844	do	do	do	165	.40	10.0	4.0	18.4	5	28
53	Rockport	Knox	Limestone	(2)	(2)	4.9	8.3	(2)	(2)	(2)
54	do	do	do	(2)	(2)	4.5	9.0	(2)	(2)	(2)
3866	(1)	do	Dolomitic limestone	178	.19	5.4	7.5	13.2	7	26
55	Rockport	do	Quartzite	(2)	(2)	2.7	14.6	(2)	(2)	(2)
784	(1)	do	Hornblende quartzite	175	.12	2.6	15.2	(2)	(2)	8
2300	Rockland (2 miles southwest of)	do	Feldspathic quartzite	165	.54	2.6	15.2	18.8	20	20
2302	Camden	do	do	168	.16	2.7	14.7	18.8	9	17
123	Rockport	do	Biotite schist	(2)	(2)	4.2	9.6	(2)	(2)	(2)
2301	Rockland	do	Marble	168	.36	5.6	7.1	10.5	5	85
2305	North Haven Island	do	Altered andesite	184	.41	2.7	15.0	17.6	12	37
2306	North Haven	do	Rhyolite	168	.50	3.2	12.6	18.0	7	106
2307	Vinal Haven	do	Olivine diabase	187	.33	2.3	17.4	18.2	12	28
2308	Long Cove	do	Hornblende gabbro	187	.28	2.8	14.3	17.8	12	48
5915	do	do	Biotite granite	165	.45	2.2	18.5	18.7	12	30
7435	Vinal Haven	do	Granite	165	.47	3.4	11.9	19.3	12	15
7507	Long Cove	do	do	165	2.29	2.8	14.5	19.3	9	21
8745	Vinal Haven	do	Biotite granite	165	.39	2.9	13.9	18.8	10	12
9445	do	do	do	165	.29	3.1	12.9	19.0	13	12
7607	(1)	Portland	Altered diabase	181	.15	3.6	11.1	17.7	12	19
2309	Woolwich	Sagadahoc	Gneissoid granite	178	.37	4.1	9.9	18.8	8	57
2311	Topsham	do	Pegmatite	165	.43	10.7	3.7	(2)	(2)	19
7439	Frankford	Waldo	Biotite granite	165	.27	5.2	7.7	18.8	6	17
2236	Machias (2 miles east of)	Washington	Altered diabase	181	.22	2.8	14.5	16.9	11	58
2285	Eastport	do	do	178	.67	2.0	20.0	18.2	20	59
2237	Blackhead (8 miles south of)	do	do	181	.50	1.6	24.7	17.9	27	82
866	Machias	do	Diabase	184	.35	2.9	13.6	(2)	(2)	35
1040	Ongonguit	York	Altered diabase	187	.04	2.3	17.4	18.5	36	27
2229	Hillsbeach	do	Diabase porphyry	184	.42	2.6	15.4	16.2	11	500+
2230	Wellsbeach	do	Gabbroitic diabase	184	.53	2.0	20.4	17.5	17	135
4228	Kennebunk	do	Diabase	187	.42	1.8	21.7	18.8	37	26
2232	Kittery	do	Quartzite schist	172	.49	2.3	17.5	16.5	18	47
2231	do	do	Gabbro	178	1.03	3.2	12.4	17.8	11	325
2234	Saco	do	Quartzite	175	.27	2.5	15.7	18.5	53	31
4229	Kittery	do	Calcareous sandstone	175	.21	3.4	11.6	18.0	22	25
5724	Sanford	do	Hypersthene granite	181	.35	4.1	9.7	17.7	9	34

[1] Exact locality not known.

[2] Test not made.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

MARYLAND.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
4954	Cumberland	Allegheny	Limestone	168	0.15	4.0	10.0	16.5	12	37
5611	Mount Savage Junction	do	Siliceous limestone	165	.13	3.0	13.3	17.5	23	52
427	Cumberland	do	Sandstone	123	9.43	8.2	4.9	(1)	(1)	38
428	do	do	Calcareous shale	168	1.90	16.2	2.5	(1)	(1)	(1)
430	do	do	Silica rock	168	1.70	13.4	3.0	(1)	(1)	(1)
1328	Sparks Station	Baltimore	Biotite gneiss	178	.25	4.0	10.0	17.7	11	18
1339	do	do	Granite gneiss	165	.32	2.9	13.7	18.2	16	52
2206	Ruxton	do	Biotite gneiss	175	.45	3.8	10.5	16.3	8	52
873	Powhattan	do	Diabase	(1)	(1)	2.2	18.5	(1)	12	7
1613	(2)	do	Augite diorite	196	.31	3.6	11.2	18.3	23	52
5976	Loreley	do	do	190	.19	2.4	16.5	17.8	10	15
2544	(2)	do	Hornblende schist	196	.27	1.9	21.5	17.3	15	10
2992	Big Gun Powder	do	do	190	.38	3.6	11.2	18.1	16	19
3062	(2)	do	Dolomitic marble	178	.20	6.3	6.3	11.0	5	15
6867	Texas	do	Siliceous marble	168	.26	27.0	1.5	7.5	3	69
6868	do	do	do	178	.19	18.8	2.1	4.5	2	18
6869	do	do	do	172	.06	10.5	3.8	12.3	3	44
3187	Whitehall (near)	do	Altered peridotite	165	.73	3.0	13.2	15.0	12	91
4104	Granite	do	Granite	168	.46	2.4	16.9	18.5	10	16
4105	Woodstock	do	do	165	.32	4.5	8.9	18.7	10	13
8351	Granite	do	Biotite granite	168	.33	3.0	13.3	18.7	9	14
5818	Ashland	do	Blast-furnace slag	178	.56	4.0	10.0	(1)	(1)	22
830	Groves Quarry	Caroline	Siliceous limestone	172	.09	2.6	15.6	(1)	(1)	31
3459	Port Deposit	Cecil	Granite gneiss	168	.17	2.0	20.2	18.7	10	13
6671	do	do	Quartzite	178	.30	2.0	20.4	18.9	24	43
8420	do	do	Hornblende schist	171	.26	2.2	18.2	19.2	9	29
343	(2)	Frederick	Dolomite	178	.25	4.5	8.9	(1)	(1)	(1)
5688	Frederick	do	do	175	.20	3.1	12.8	16.3	15	46
439	do	do	Argillaceous limestone	162	.19	1.9	6.8	(1)	(1)	(1)
1314	Frederick (near)	do	Limestone	172	.19	2.8	14.1	14.6	12	60
487	Frederick	do	do	168	.13	6.0	6.6	(1)	(1)	(1)
2473	Washington Junction	do	do	175	.21	3.9	10.2	(1)	(1)	56
3836	Frederick	do	do	168	.33	3.3	12.1	(1)	(1)	53
4884	do	do	do	175	.08	4.1	9.9	10.7	16	10
2474	Washington Junction	do	Diabase	187	.40	1.1	36.4	18.8	21	17
2227	(2)	Garrett	Limestone	188	.43	3.7	10.9	15.3	4	96
3134	Bloomington	do	Feldspathic sandstone	162	.74	3.7	10.8	18.8	9	9
5761	Sue Quarry	do	Calcareous sandstone	165	.62	2.8	14.3	15.8	11	58
7291	Conowingo	Cecil	Hypersthene diabase	187	.49	2.6	15.3	18.4	8	41

2668	(2)	Harford	Hornblende schist	184	.55	3.3	12.0	17.8	19	35
2991	Havre de Grace	do	do	181	.17	2.0	20.0	18.4	20	9
3409	do	do	Quartz hornblende schist	172	.38	2.2	18.0	18.6	19	7
3443	do	do	Hornblende schist	181	.11	3.1	12.8	17.3	34	23
4212	do	do	do	184	.61	3.3	12.2	18.7	30	31
4418	do	do	Schist	175	.11	2.9	14.0	18.2	44	19
6623	do	do	Quartz hornblende schist	172	.38	2.7	14.8	(1)	(1)	15
3407	do	do	Diorite	181	.58	2.1	19.4	18.9	27	5
3442	do	do	Basic diorite	193	.35	2.5	16.3	18.5	23	8
3408	do	do	Gneissoid granite	165	1.26	4.2	9.5	18.5	12	9
5293	do	do	Altered granite	168	.23	2.0	20.0	18.6	12	12
5694	do	do	Gneissoid granite	168	.27	2.3	17.1	17.8	14	75
5696	do	do	do	168	.48	1.7	23.5	18.8	17	34
5698	do	do	do	168	.29	2.0	19.6	18.6	9	14
5699	do	do	do	168	.22	2.2	18.5	18.3	10	26
6959	do	do	do	168	.21	2.4	16.8	18.8	16	8
3441	do	do	Granite gneiss	168	.25	3.0	13.4	18.6	16	15
4211	do	do	do	168	.10	3.2	12.3	18.8	12	10
4673	Port Deposit	Cecil	Hornblende gneiss	190	.14	3.5	11.6	(1)	(1)	23
5294	Havre de Grace	Harford	do	184	.14	1.4	29.0	18.8	32	9
5695	do	do	Sericite gneiss	168	.26	2.6	15.5	19.0	9	13
5697	do	do	Amphibolite	193	.16	1.5	26.0	18.7	40	36
829	Savage Station	Howard	do	190	.04	1.6	25.3	(1)	(1)	(1)
8587	(2)	do	do	193	.21	2.3	17.2	18.7	16	20
8642	Ellicott	do	Biotite gneiss	(1)	(1)	4.5	8.9	17.5	4	34
1319	(2)	do	Hornblende schist	193	.20	1.8	22.6	18.4	26	11
4168	Savage Station (½ mile north of)	do	do	190	.15	1.4	28.6	18.8	37	8
1329	(2)	do	Granite	165	.24	3.0	13.2	(1)	(1)	10
4132	Gilford	do	do	165	.31	2.8	14.3	19.0	8	25
363	Dickerson	Montgomery	Diabase	187	.14	2.8	14.2	(1)	(1)	(1)
1336	do	do	do	181	.56	2.2	18.4	(1)	(1)	32
1626	do	do	do	187	.51	1.8	22.5	(1)	(1)	87
2494	do	do	do	187	.39	2.0	20.2	18.5	25	27
2900	(2)	do	do	190	.36	2.0	20.1	18.5	24	11
5348	Point of Rocks	do	do	190	.11	1.9	21.3	18.6	46	7
5722	Germantown	do	Altered diabase	187	.49	1.8	21.7	18.0	18	63
7316	Dickerson	do	Diabase	187	.45	1.9	20.6	19.2	28	102
8583	(2)	do	do	187	.20	1.8	22.7	18.3	44	18
1157	(2)	do	Gabbro	193	.15	2.3	17.2	18.7	22	82
8584	(2)	do	Dolomite	168	.11	5.8	6.9	17.3	9	20
2011	(2)	do	Muscovite granite	165	1.25	3.2	12.4	16.4	10	19
8289	Glen Echo (near)	do	Granite	168	.71	2.8	14.3	18.7	9	19
8290	do	do	Weathered granite	168	.29	3.6	11.1	19.0	7	18
2359	Laytonsville	do	Hornblende serpentine	165	.89	2.8	14.2	18.6	21	45
3405	Washington Grove	do	Serpentine	165	.50	3.2	12.5	18.3	14	10
3837	Gaithersburg	do	do	165	.44	3.8	10.5	18.6	16	7
4936	Rockville	do	do	168	.19	2.5	16.0	18.4	17	15
2360	Washington Grove	do	Talc schist	165	.61	8.2	4.9	.9	3	28
5299	Derwood	do	Mica schist	175	.28	3.3	12.2	17.3	14	18
5300	do	do	Quartz mica schist	172	.32	3.1	13.0	17.8	17	23

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

MARYLAND—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
5529	Seneca	Montgomery	Mica schist	168	1.67	12.2	3.3	(1)	(1)	76
2454	Washington Grove	do	Quartz	165	.08	14.9	2.7	(1)	(1)	2
5723	Germantown	do	do	165	.05	7.3	5.5	(1)	(1)	0
6953	Rockville (near)	do	do	165	.20	10.9	3.7	(1)	(1)	1
2844	Seneca	do	Sandstone	168	1.03	4.8	8.4	11.8	11	27
2845	do	do	Ferrugineous sandstone	159	1.83	(1)	(1)	15.8	6	150
8136	Seneca (near)	do	do	156	13	4.8	8.3	15.5	5	111
8137	do	do	Feldspathic sandstone	159	.30	3.1	12.7	16.3	7	36
3389	(2)	do	Granite gneiss	178	.37	(1)	(1)	17.7	7	24
3390	(2)	do	do	175	.23	(1)	(1)	17.7	8	21
3391	(2)	do	Sericite gneiss	175	1.02	(1)	(1)	14.9	6	34
3809	(2)	do	Gneiss	168	.34	4.2	9.5	17.8	15	15
3820	(2)	do	do	178	.19	6.3	6.4	17.8	8	20
3821	(2)	do	Quartz gneiss	178	.18	3.6	11.1	17.3	7	15
3870	Derwood	do	Diorite gneiss	187	.28	5.7	7.0	17.6	7	24
4908	Clopper	do	Altered gneiss	190	.38	5.5	7.2	16.8	12	19
5625	Rockville	do	Sericite gneiss	181	.25	6.1	6.5	17.6	12	17
6957	(2)	do	Chloritic gneiss	175	.16	7.0	5.7	16.6	7	5
8622	Potomac	do	Chlorite sericite gneiss	168	.50	(1)	(1)	18.7	4	30
6009	Gaithersburg	do	Feldspathic quartzite	172	.04	5.7	7.0	18.1	15	18
3217	Laurel	Prince George	Hornblende schist	190	.26	1.3	31.7	18.3	20	15
7921	Easton	Talbot	Dolomitic marble	(1)	(1)	3.9	10.6	(1)	(1)	(1)
8092	do	do	Hornblende granite gneiss	168	.22	2.7	14.9	18.8	7	13
7505	Hancock	Washington	Ferruginous sandstone	172	.62	2.7	14.7	18.2	18	26
5826	Hagerstown	do	Limestone	168	.18	5.2	7.7	16.7	13	29
8445	Security	do	do	168	.68	5.7	7.0	16.7	6	35
8446	do	do	do	168	.43	6.0	6.7	15.9	4	45

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10	Lenox	Berkshire	Mica schist	178	(1)	5.0	8.0	(1)	(1)	(1)
41	Lee	do	Schist	(1)	(1)	3.3	12.2	(1)	(1)	(1)
69	Pittsfield	do	Mica schist	172	(1)	4.1	9.8	(1)	(1)	(1)
2928	Lenox	do	Sericite schist	187	0.19	4.1	9.8	16.8	8	44
47	Great Barrington	do	Limestone	(1)	(1)	4.2	9.5	(1)	(1)	(1)
102	Pittsfield	do	do	175	(1)	4.3	9.4	(1)	(1)	(1)

298	North Adams	do	do	(1)	(1)	4.7	8.5	(1)	(1)	(1)	
51	Lee	do	Gneiss	(1)	(1)	3.5	11.4	(1)	(1)	(1)	
8287	North Adams	do	Biotite gneiss	187	.68	7.7	5.2	18.3	6		26
80	Great Barrington	do	Quartzite	(1)	(1)	2.7	14.6	(1)	(1)	(1)	
104	Lee	do	do	162	(1)	3.4	11.7	(1)	(1)	(1)	
121	do	do	do	(1)	(1)	3.4	11.7	(1)	(1)	(1)	
8440	North Adams	do	do	165	.18	3.5	11.4	(1)	(1)		2
119	Florida	do	Stytyte	(1)	(1)	19.8	2.0	(1)	(1)	(1)	
101	Lee	do	Marble	172	(1)	14.0	2.9	(1)	(1)	(1)	
6118	Great Barrington	do	do	178	.13	5.4	7.4	15.3	5		24
326	Lanesborough	do	Blast furnace slag	169	.04	10.6	3.8	(1)	(1)	(1)	
1008	Becket	do	Gneissoid granite	168	.23	1.6	24.8	17.6	14		35
77	North Dartmouth	Bristol	Granite	(1)	(1)	2.7	14.8	(1)	(1)	(1)	
81	North Westport	do	Hornblende granite	(1)	(1)	2.8	14.2	(1)	(1)	(1)	
445	Taunton	do	Granite	168	1.59	4.1	9.7	(1)	(1)	(1)	
9485	New Bedford	do	Chlorite gneiss	168	.62	2.5	16.0	18.2	8		32
1	Salem	Essex	Augite diorite	181	(1)	2.6	15.6	(1)	(1)	(1)	
35	Newberry	do	Quartz diorite	(1)	(1)	2.8	14.5	(1)	(1)	(1)	
117	Beverly	do	Diorite	(1)	(1)	2.4	16.7	(1)	(1)	(1)	
611	Salem	do	Augite diorite	184	.33	2.7	14.7	(1)	(1)		112
1351	Peabody	do	do	184	.18	3.0	13.4	16.9	15		67
1945	Beverly	do	Diorite	187	.35	2.8	14.5	17.3	16		39
15	Saugus	do	Hornblende granite	168	(1)	4.5	9.0	(1)	(1)	(1)	
34	Rockport	do	do	165	(1)	3.2	12.6	(1)	(1)	(1)	
62	Beverly	do	do	172	(1)	2.8	14.6	(1)	(1)	(1)	
74	do	do	Granite	(1)	(1)	1.9	21.2	(1)	(1)	(1)	
89	do	do	Hornblende granite	(1)	(1)	2.3	17.5	(1)	(1)	(1)	
116	Ipswich	do	do	(1)	(1)	2.2	18.4	(1)	(1)	(1)	
1191	Lawrence	do	Gneissoid granite	162	.72	(1)	(1)	19.1	21		23
1550	Beverly	do	Hornblende granite	168	.39	1.6	25.3	18.9	31		26
1752	Gloucester	do	Granite	147	2.77	2.0	20.2	18.7	19		24
4012	Peabody	do	Hornblende granite	165	.05	4.5	9.0	19.0	8		16
6890	Rockport	do	Biotite granite	165	.22	3.3	12.1	19.0	12		16
6891	do	do	do	165	.17	4.0	10.0	18.9	10		13
6892	do	do	do	165	.15	4.0	10.1	18.8	10		13
6893	do	do	do	165	.24	3.8	10.5	18.8	10		8
6894	do	do	do	165	.29	3.7	10.8	18.7	9		14
16	Lynn	do	Diabase	190	(1)	2.0	19.8	(1)	(1)	(1)	
21	do	do	do	190	(1)	2.0	20.4	(1)	(1)	(1)	
22	Saugus	do	do	187	(1)	2.5	16.1	(1)	(1)	(1)	
25	do	do	do	187	(1)	2.5	16.0	(1)	(1)	(1)	
28	do	do	do	190	(1)	2.2	18.3	(1)	(1)	(1)	
29	Lynn	do	do	187	(1)	2.2	18.2	(1)	(1)	(1)	
31	Newbury	do	Olivine diabase	184	(1)	2.0	20.4	(1)	(1)	(1)	
32	Saugus	do	Diabase	190	(1)	1.9	21.2	(1)	(1)	(1)	
37	Newbury	do	do	(1)	(1)	2.5	16.1	(1)	(1)	(1)	
61	Ipswich	do	Altered diabase	(1)	(1)	1.7	24.1	(1)	(1)	(1)	
115	Salem	do	Diabase	(1)	(1)	2.8	14.4	(1)	(1)	(1)	
312	do	do	do	(1)	(1)	4.5	8.9	(1)	(1)	(1)	
315	do	do	do	(1)	(1)	3.1	12.8	(1)	(1)	(1)	

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

MASSACHUSETTS—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
329	Merrimac	Essex	Diabase	(1)	(1)	3.1	12.9	(1)	(1)	(1)
1190	Lawrence	do	do	184	.57	(1)	(1)	17.9	24	500
5825	Cliftondale	do	Altered diabase	181	.32	2.0	20.4	17.6	21	43
24	Lynn	do	Felsite	165	(1)	2.7	14.7	(1)	(1)	(1)
27	do	do	do	165	(1)	3.3	12.3	(1)	(1)	(1)
97	Rowley	do	do	(1)	(1)	3.3	12.3	(1)	(1)	(1)
26	Gloucester	do	Hornblende granitite	165	(1)	3.6	11.0	(1)	(1)	(1)
30	do	do	Augite syenite	172	(1)	3.2	12.6	(1)	(1)	(1)
2297	Swampscott	do	do	190	.28	3.1	12.7	17.8	14	62
2648	Salem	do	Altered syenite	187	.23	2.2	18.5	17.3	8	375
33	Salisbury	do	Camptonite	175	(1)	2.4	16.8	(1)	(1)	(1)
65	Lawrence	do	Siliceous limestone	172	(1)	2.3	17.2	(1)	(1)	(1)
222	do	do	Limestone	(1)	(1)	2.1	19.0	(1)	(1)	(1)
181	Methuen	do	Quartzite	(1)	(1)	2.9	14.0	(1)	(1)	(1)
226	do	do	do	(1)	(1)	2.1	18.7	(1)	(1)	(1)
1192	Lawrence	do	Granite gneiss	165	.38	(1)	(1)	19.0	12	14
1375	Peabody	do	Altered gabbro	184	.23	2.9	13.7	(1)	(1)	28
3543	Haverhill	do	Hornblende mica schist	172	.51	3.2	12.3	18.4	17	26
39	Orange	Franklin	Hornblende granite	(1)	(1)	4.1	9.8	(1)	(1)	(1)
50	Buckland	do	Hornblende gneiss	(1)	(1)	5.0	7.9	(1)	(1)	(1)
52	do	do	do	(1)	(1)	3.4	11.7	(1)	(1)	(1)
211	Orange	do	do	(1)	(1)	3.9	10.3	(1)	(1)	(1)
76	Deerfield	do	Diabase	(1)	(1)	1.4	28.6	(1)	(1)	(1)
268	do	do	do	(1)	(1)	1.4	28.8	(1)	(1)	(1)
5671	Westfield	Hampden	Altered diabase	187	.62	1.6	24.7	17.8	28	200
12	West Springfield	do	Olivine diabase	184	(1)	2.6	15.6	(1)	(1)	(1)
66	Holy Oak	do	Diabase	184	(1)	2.0	19.7	(1)	(1)	(1)
67	West Springfield	do	do	(1)	(1)	1.8	22.1	(1)	(1)	(1)
68	Monson	do	do	187	(1)	1.8	22.1	(1)	(1)	(1)
91	West Springfield	do	Olivine diabase	(1)	(1)	1.6	25.0	(1)	(1)	(1)
93	do	do	Diabase	(1)	(1)	1.9	21.6	(1)	(1)	(1)
517	Westfield	do	do	187	.50	1.3	30.7	(1)	(1)	(1)
44	Chester	do	Schist	(1)	(1)	3.3	12.2	(1)	(1)	(1)
2423	Springfield	do	Dolomite	175	.98	5.4	7.4	18.2	21	28
8	(2)	Hampshire	Hornblende granite	172	(1)	3.7	10.7	(1)	(1)	(1)
6572	North Hampton	do	Altered biotite granite	172	.24	3.1	12.8	18.3	11	24
64	Ware	do	Diabase	187	(1)	1.7	23.3	(1)	(1)	(1)
78	Amherst	do	do	(1)	(1)	2.0	20.3	(1)	(1)	(1)
2	Everett	Middlesex	Olivine diabase	178	(1)	2.9	13.9	(1)	(1)	(1)

19	Somerville	do	Diabase	178	(1)	4.3	9.3	(1)	(1)	(1)	
20	Medford	do	do	190	(1)	2.5	15.8	(1)	(1)	(1)	
96	Watertown	do	do	(1)	(1)	2.9	13.7	(1)	(1)	(1)	
270	Malden	do	do	(1)	(1)	2.1	18.9	(1)	(1)	(1)	
318	Waltham	do	do	(1)	(1)	2.5	16.0	(1)	(1)	(1)	
386	Winchester	do	Altered diabase	200	.83	6.3	6.4	(1)	(1)	(1)	
790	do	do	Meta diabase	187	.25	3.7	10.4	(1)	(1)		53
8493	Winchester Highlands	do	Altered diabase	187	.41	1.9	21.1	18.0	11		43
4	Waltham	do	Hornblende granite	162	(1)	3.3	12.2	(1)	(1)	(1)	
60	Ashby	do	Granite	(1)	(1)	4.8	8.4	(1)	(1)	(1)	
125	Malden	do	Hornblende granite	(1)	(1)	2.8	14.1	(1)	(1)	(1)	
2610	Dunstable	do	Granite	165	.40	2.4	16.5	18.6	18		35
8874	Westford	do	do	165	.28	2.3	17.2	(1)	8	(1)	
8875	do	do	do	162	.48	2.9	13.6	(1)	8	(1)	
8862	do	do	do	165	.31	2.5	16.0	(1)	8	(1)	
6	Newton	do	Trachyte	175	(1)	1.9	20.8	(1)	(1)	(1)	
103	Somerville	do	Slate	172	(1)	4.7	8.5	(1)	(1)	(1)	
5744	do	do	do	175	.67	3.8	10.5	11.8	(1)		34
118	Ashby	do	Granite gneiss	(1)	(1)	6.6	6.1	(1)	(1)	(1)	
3539	Dracut	do	Biotite hornblende gneiss	178	.30	4.5	8.9	15.9	10		27
304	Winchester	do	Diorite	(1)	(1)	3.9	10.2	(1)	(1)	(1)	
1799	Marlborough	do	Hornblende schist	187	.30	2.1	19.4	18.7	23		7
5355	Pepperell	do	Calcareous sandstone	172	.33	2.0	20.4	17.7	28		25
5957	Malden	do	Altered rhyolite	168	.03	1.7	24.1	19.3	30		23
7	Brookline	Norfolk	Diabase	178	(1)	3.5	11.4	(1)	(1)	(1)	
18	Quincy	do	do	184	(1)	2.6	15.2	(1)	(1)	(1)	
23	Brookline	do	Olivine diabase	187	(1)	2.7	14.7	(1)	(1)	(1)	
219	Milton	do	Diabase	(1)	(1)	1.8	22.8	(1)	(1)	(1)	
230	Quincy	do	do	(1)	(1)	1.6	25.6	(1)	(1)	(1)	
369	Brookline	do	Altered diabase	181	0.19	2.1	18.9	(1)	(1)	(1)	
843	Stoughton	do	Diabase	187	.07	1.7	23.5	(1)	(1)		29
1044	Quincy	do	do	193	.08	1.6	25.6	18.6	33	(1)	
5909	Dover	do	Altered felsite	178	.42	2.2	18.3	18.7	16		37
7090	Needham	do	do	181	.12	4.1	9.8	10.7	6		26
17	Quincy	do	Hornblende granite	165	(1)	3.9	10.2	(1)	(1)	(1)	
8793	Weymouth	do	Altered granite	165	.38	1.6	25.0	19.3	19		10
72	Quincy	do	Felsite	(1)	(1)	2.0	19.9	(1)	(1)	(1)	
92	North Weymouth	do	do	(1)	(1)	2.8	14.5	(1)	(1)	(1)	
196	Milton	do	Sandstone	(1)	(1)	1.6	25.7	(1)	(1)	(1)	
299	Quincy	do	do	(1)	(1)	1.7	24.0	(1)	(1)	(1)	
218	Milton	do	Syenite porphyry	(1)	(1)	1.9	21.0	(1)	(1)	(1)	
367	Brookline	do	Slate	175	.52	4.7	8.5	(1)	(1)	(1)	
368	do	do	Rhyolite	178	.19	1.8	22.9	(1)	(1)	(1)	
718	Quincy	do	Chlorite schist	181	.13	5.1	7.9	(1)	(1)	(1)	
2475	Franklin	do	Sericite gneiss	168	.83	7.0	5.7	18.4	5		21
3856	Hyde Park	do	Altered rhyolite breccia	168	.31	3.9	10.2	19.0	17		10
8616	North Stoughton	do	Altered diorite	187	.08	2.2	18.5	19.2	30		30
5	Duxbury	Plymouth	Gneiss	168	(1)	3.0	13.5	(1)	(1)	(1)	
320	Hingham	do	Diabase	(1)	(1)	2.9	13.8	(1)	(1)	(1)	

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

MASSACHUSETTS—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
1863	Hingham	Plymouth	Altered diabase	190	.17	1.8	22.2	18.0	25	67
1887	....do	....do	....do	175	.36	2.2	18.3	18.0	19	43
3	Revere	Suffolk	Felsite	165	(1)	3.0	13.2	(1)	(1)	(1)
40	Boston	....do	....do	(1)	(1)	2.5	16.1	(1)	(1)	(1)
124	Revere	....do	....do	(1)	(1)	2.6	15.2	(1)	(1)	(1)
1572	Everett	....do	Augite diorite	175	.95	(1)	(1)	18.6	22	21
1573	....do	....do	Altered diorite	172	.91	(1)	(1)	17.7	23	27
7506	Revere	....do	Altered rhyolite	165	3.44	2.9	13.8	19.6	8	25
63	Uxbridge	Worcester	Hornblende granite	187	(1)	3.2	12.6	(1)	(1)	(1)
242	Clinton	....do	Gneissoid granite	(1)	(1)	4.8	8.3	(1)	(1)	(1)
256	Fitchburg	....do	Granite	(1)	(1)	2.2	17.9	(1)	(1)	(1)
266	Worcester	....do	....do	(1)	(1)	4.6	8.6	(1)	(1)	(1)
279	Clinton	....do	....do	(1)	(1)	4.6	8.7	(1)	(1)	(1)
295	Fitchburg	....do	....do	(1)	(1)	4.2	9.5	(1)	(1)	(1)
7522	....do	....do	....do	168	.28	4.4	9.1	17.2	5	28
7521	....do	....do	....do	165	.31	4.3	9.3	17.7	6	28
7523	....do	....do	....do	165	.34	3.2	12.7	17.7	6	24
8394	Worcester	....do	....do	162	.72	5.6	7.1	19.0	5	61
83	Sterling	....do	Diabase	(1)	(1)	2.1	19.3	(1)	(1)	(1)
88	Athol	....do	Granite gneiss	(1)	(1)	3.2	12.5	(1)	(1)	(1)
203	Auburn	....do	....do	(1)	(1)	3.2	12.5	(1)	(1)	(1)
245	Clinton	....do	Gneiss	(1)	(1)	4.5	9.0	(1)	(1)	(1)
5378	Leominster	....do	Granite gneiss	175	.36	3.6	11.0	16.4	10	40
5988	West Auburn	....do	Mica gneiss	165	.49	3.0	13.2	18.0	13	14
7711	Grafton	....do	Granite gneiss	165	.45	5.2	7.7	19.5	8	22
114	West Auburn	....do	Limestone	(1)	(1)	3.3	12.0	(1)	(1)	(1)
227	Millville	....do	Diorite	(1)	(1)	2.7	14.8	(1)	(1)	(1)
243	Clinton	....do	Hornblende schist	(1)	(1)	8.2	4.9	(1)	(1)	(1)
244	....do	....do	Mica schist	(1)	(1)	4.9	8.2	(1)	(1)	(1)
411	Webster	....do	....do	178	.30	6.3	6.4	(1)	(1)	(1)
5401	Leominster	....do	Biotite schist	172	.36	3.6	11.2	16.7	6	34
5379	....do	....do	Sericite schist	168	.92	3.9	10.2	17.2	8	63
247	Clinton	....do	Felsite	(1)	(1)	2.5	16.1	(1)	(1)	(1)
265	Sterling	....do	Hornblende syenite	(1)	(1)	2.3	17.1	(1)	(1)	(1)
5400	Leominster	....do	Fieldstone	(1)	(1)	4.5	8.9	(1)	(1)	30

1243	Grand Island	Alger	Dolomitic sandstone	159	0.45	5.2	7.8	17.3	7	20
1633	Eben	....do	Siliceous dolomite	168	1.88	5.7	7.1	14.7	5	39
2216	Rock River Township	....do	Siliceous limestone	159	3.92	7.2	5.6	10.2	7	34
5581	Trenary	....do	Argillaceous limestone	168	.56	5.6	7.1	13.8	6	33
1594	Alpena	Alpena	Limestone	165	1.55	7.9	5.1	(1)	(1)	53
2105	Whitney	Arenac	....do	165	1.19	3.3	12.1	14.3	8	66
5004	Charlevoix	Charlevoix	....do	147	4.24	9.9	4.0	.0	4	9
6399	Sault Ste. Marie	Chippewa	Uralitic diabase	181	.47	2.7	14.6	18.8	13	60
6483	....do	....do	Altered diabase	187	.61	2.1	18.7	18.7	31	33
7084	....do	....do	Altered gabbro	193	.11	4.1	9.8	17.3	12	67
1841	Wells	Delta	Limestone	168	1.09	3.7	10.9	(1)	(1)	58
1848	Wells Township	....do	....do	168	1.09	3.7	10.9	16.0	11	58
1846	....do	....do	Dolomite	175	.39	3.4	11.6	16.5	12	60
1621	Breitung Township	Dickenson	Ferruginous slate	209	1.44	4.3	9.4	(1)	(1)	9
1741	Iron Mountain	....do	....do	196	1.09	5.2	7.8	(1)	(1)	7
1622	....do	....do	Dolomite	178	.40	4.6	8.6	17.2	8	25
1782	(2)	....do	Gneissoid granite	165	.53	4.2	9.4	18.5	13	13
2008	Iron Mountain	....do	Ferruginous sandstone	190	1.32	4.9	8.2	(1)	(1)	50
2625	....do	....do	....do	203	1.69	5.7	7.0	(1)	(1)	10
2603	....do	....do	Altered diorite	184	.37	3.9	10.4	(1)	(1)	30
2611	....do	....do	Amphibolite	181	.54	3.2	12.5	18.1	29	28
2675	....do	....do	Quartzite	162	.61	3.5	11.6	(1)	(1)	2
5146	....do	....do	Hornblende schist	190	.17	1.7	23.5	18.6	27	33
4206	Bellevue	Eaton	Limestone	159	3.08	7.5	5.3	11.8	4	20
4320	....do	....do	....do	165	.85	4.7	8.5	15.3	7	42
4321	....do	....do	....do	168	.54	3.2	12.3	16.0	11	66
1335	Petoskey	Emmett	....do	162	1.36	4.5	8.9	13.8	12	26
4075	Elk Rapids	....do	....do	165	1.58	5.1	7.8	14.5	12	85
4682	Petoskey	....do	Argillaceous limestone	165	1.24	5.6	7.1	6.3	7	15
4854	Petoskey (3 miles north of)	....do	Siliceous limestone	159	2.34	8.3	4.8	18.8	13	12
5034	Bessener	Gogebic	Altered diabase	181	.45	5.0	8.0	17.5	7	132
1131	Calumet	Houghton	....do	175	1.24	3.2	12.7	16.5	18	183
1132	....do	....do	....do	181	.42	4.2	9.6	13.0	(1)	118
4153	Hancock Post Office	....do	Altered basalt	184	2.12	2.6	15.6	18.2	10	120
6913	Houghton	....do	Smelter slag	212	.46	6.3	6.4	16.7	8	(1)
1287	Bay Port	Huron	Limestone	165	1.34	2.7	14.8	15.1	12	49
1288	....do	....do	Dolomitic limestone	165	1.35	(1)	(1)	15.3	12	50
4063	....do	....do	Limestone	165	1.60	3.3	12.0	15.4	11	48
6082	Windsor Township	....do	Siliceous limestone	165	1.08	4.0	10.0	16.0	13	19
3767	Port Austin	....do	Sandstone	(1)	(1)	7.6	5.3	.0	5	36
4027	....do	....do	Altered diabase	190	.14	1.8	22.0	18.8	29	32
2081	Whittemore	Iosco	Limestone	162	1.94	4.5	8.9	12.5	9	69
2548	....do	....do	....do	165	1.84	5.9	6.7	13.3	6	62
1970	Jackson	Jackson	....do	162	2.13	5.6	7.2	12.7	5	52
1971	(2)	....do	....do	168	3.08	9.5	4.2	8.3	5	107
3469	(2)	Keweenaw	Olivine diabase	184	.16	3.0	13.3	18.2	17	105
3507	Mandan	....do	Altered diabase	178	.11	4.2	9.5	16.8	12	500+
3508	....do	....do	....do	178	.22	5.1	7.8	12.3	6	500+

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

MICHIGAN—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
2503	(1)	Lenawee	Quartzite	165	.24	1.9	20.8	19.5	24	4
6476	Garfield Township	Mackinac	Limestone	168	.44	4.6	8.8	15.3	5	11
7152	Negaunee	Marquette	Altered gabbro	187	.11	2.9	14.0	17.8	10	120
7153	do	do	do	184	.17	2.7	15.0	17.3	12	102
1133	Marquette	do	Hornblende schist	184	.14	4.7	8.5	18.0	30	194
2455	Marquette (near)	do	do	175	.33	4.1	9.8	16.3	20	143
3198	do	do	Epidote chlorite schist	181	.16	2.6	15.3	16.8	18	83
3199	do	do	Hornblende schist	190	.40	2.5	15.7	17.8	26	26
1635	(1)	do	Chloritized basalt	184	.37	2.1	18.9	17.2	23	38
1636	(1)	do	do	184	.24	2.5	15.9	17.2	22	58
1637	(1)	do	Ferruginous slate	175	.51	4.8	8.3	15.2	10	17
1675	Negaunee	do	Slate	175	.51	(2)	(2)	16.8	12	7
1676	do	do	Altered diabase	172	1.52	5.5	7.3	18.5	9	58
2456	Marquette (near)	do	do	165	1.81	4.5	8.9	16.0	13	129
2645	(1)	do	do	187	.17	3.4	11.7	16.8	12	151
2688	Negaunee	do	do	181	.17	4.0	10.1	17.4	10	41
2825	Marquette (near)	do	do	184	.38	3.7	10.8	17.2	19	43
3090	do	do	do	187	.14	1.5	26.7	18.3	33	37
5030	do	do	do	184	.18	2.6	15.4	16.7	20	31
2826	do	do	Quartzite	165	.07	3.3	12.1	(2)	(2)	4
1629	Ida	Monroe	Dolomite	162	3.46	6.0	6.6	13.3	7	34
3834	Monroe	do	do	165	2.80	4.0	10.1	14.4	6	20
3835	do	do	do	165	3.28	4.5	8.8	14.8	5	24
4955	Bedford	do	do	165	.29	4.1	9.8	14.9	10	18
6085	Kalamazoo	do	Dolomite	175	1.54	6.4	6.3	5.7	3	11
5003	Ida	do	Calcareous sandstone	165	.26	6.2	6.5	18.4	13	16
9222	Roger's City	Presque Isle	Limestone	162	1.86	5.4	7.4	(2)	(2)	28
9593	Caleite	do	do	165	.74	5.6	7.1	14.3	5	15
2806	Manistique	Schoolcraft	do	168	.32	4.5	8.8	15.8	6	25
2807	do	do	do	172	.27	4.2	9.4	14.3	6	26
2808	do	do	do	175	1.00	2.7	14.9	16.7	12	27
2874	do	do	Slag	168	1.81	23.4	1.7	18.0	7	3
3254	Limekiln crossing	Wayne	Dolomite	156	3.77	4.8	8.3	12.6	4	14
8301	(1)	do	do	162	.23	4.9	8.2	14.8	4	18
3255	Detroit	do	Limestone	168	.87	5.4	7.4	13.3	9	17
4821	do	do	Blast furnace slag	159	1.01	9.3	4.3	11.3	2	88

MINNESOTA.

9532	Mankato	Blue Earth	Argillaceous-dolomite	159	3.22	4.7	8.5	16.7	14	51
1010	Carlton	Carlton	Slate	175	.67	6.0	6.7	11.2	5	43
2442	....do	....do	....do	172	.53	2.8	14.3	12.7	10	75
3764	Mantorville	Dodge	Dolomite	150	8.24	11.5	3.5	2.0	3	41
1170	Courtland	Nicollet	Quartzite	165	.39	1.6	24.5	19.0	22	42
2340	....do	....do	....do	165	.15	2.1	19.2	19.7	12	13
2410	Pipestone	Pipestone	Ferruginous sandstone	172	.40	4.6	8.8	14.5	16	11
7954	Sandstone	Pine	....do	156	1.40	11.6	3.3	15.2	4	6
8943	....do	....do	Sandstone	156	1.23	13.8	2.9	14.8	4	55
2426	Redwood Falls	Redwood	Granite gneiss	165	.28	2.4	16.8	19.0	16	17
2427	....do	....do	Weathered granite	134	(2)	15.2	2.6	(2)	2	255
1241	St. Cloud	Sherburne	Grano-dorite	168	.12	(2)	(2)	18.0	19	9
807	Duluth	St. Louis	Olivine gabbro	172	.12	4.7	8.6	17.4	10	42
5301	....do	....do	Altered gabbro	172	.50	5.2	7.8	16.8	8	134
2909	Minnesota City	Winona	Dolomite	168	1.74	5.0	8.0	13.3	5	42
5524	Stockton	....do	Argillaceous dolomite	165	2.97	7.9	5.1	5.6	5	43

MISSISSIPPI.

2590	Kosciusko	Attala	Sandstone	162	0.90	6.3	6.3	19.2	14	5
5890	Houston	Chickasaw	Argillaceous limestone	150	6.28	12.2	3.3	6.7	5	49
6812	Woodland	....do	Ferruginous sandstone	162	4.91	23.7	1.7	(2)	(2)	12
4532	Stonington	Jefferson	Sandstone, ferruginous	131	11.60	31.8	1.3	(2)	(2)	(2)
8240	(1)	Lauderdale	Opaline sandstone	139	.60	14.9	2.7	18.5	5	127
8241	(1)	....do	Sandstone	153	1.91	6.2	6.5	19.3	10	9
1514	Columbus	Lowndes	Limestone	159	3.46	4.2	9.5	7.4	6	41
6080	....do	....do	Argillaceous limestone	162	2.40	5.3	7.6	10.0	6	22
5897	Holly Springs	Marshall	Ferruginous sandstone	181	1.72	28.1	1.4	15.4	3	27
6607	District No. 1	Neshoba	Argillaceous sandstone	119	14.00	10.1	4.0	11.0	5	394
5871	Macon	Noxubee	Limestone	165	1.57	4.5	8.9	13.7	10	21

MISSOURI.

1775	Kirksville	Adair	Limestone	165	1.25	4.9	8.1	16.5	8	31
1289	Columbia	Boone	....do	165	.85	8.8	4.6	.0	4	69
1290	....do	....do	....do	162	1.06	6.6	6.1	7.7	5	36
6375	Rocheport	....do	....do	165	1.31	9.3	4.3	12.3	3	50
6376	Portland	Callaway	Argillaceous dolomite	153	3.78	8.7	4.6	(2)	(2)	50
4398	Cape Girardeau	Cape Girardeau	Limestone	168	.49	3.7	10.8	15.8	9	42
6377	Sweeney	Cooper	Argillaceous limestone	165	2.67	4.8	8.3	13.5	8	46
1027	Springfield	Greene	Chert	165	.94	5.4	7.5	(2)	(2)	106

[1] Exact locality not known.

[2] Test not made.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

MISSOURI—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
6472	Kansas City	Jackson	Limestone	165	1.82	4.8	8.3	13.4	6	45
6473	....do	....do	....do	162	1.82	6.3	6.3	15.2	4	25
7096	(1)	....do	....do	168	.67	7.2	5.6	14.1	2	16
7095	Independence	....do	....do	165	.90	5.3	7.5	12.0	2	67
7097	....do	....do	....do	150	4.66	19.4	2.1	4.5	3	33
1862	Carthage	Jasper	....do	168	.22	6.0	6.6	7.3	8	67
6045	....do	....do	....do	165	.83	6.4	6.3	7.7	5	(2)
3203	Webb City	....do	Chert	162	.58	4.5	8.9	(2)	(2)	35
1521	Edina	Knox	Limestone	165	.96	7.1	5.6	6.1	5	94
5180	Lexington	Lafayette	....do	165	1.38	4.5	8.8	13.7	6	27
1511	Macon	Macon	....do	168	1.35	3.4	11.7	16.6	14	37
1513	....do	....do	....do	168	1.07	3.9	10.4	16.1	14	35
1080	Mine Lamotte	Madison	....do	175	.52	4.0	10.1	15.5	10	55
1016	Neosho	Newton	Chert	(2)	(2)	4.6	8.8	(2)	(2)	(2)
1125	....do	....do	....do	125	11.10	6.9	5.8	19.6	21	38
1634	Vider's post office	St. Louis	Limestone	165	1.03	3.9	10.4	14.7	8	31
1081	St. Louis	....do	....do	168	.75	3.8	10.4	14.6	9	55
1596	....do	....do	....do	168	.60	5.6	7.2	12.8	6	30
7284	Mincke	....do	....do	168	.60	6.4	6.3	10.2	4	34
8221	St. Louis	....do	....do	168	1.33	3.9	10.3	(2)	(2)	45
8216	....do	....do	....do	168	.73	3.7	10.8	(2)	(2)	40
8217	....do	....do	....do	168	.64	3.8	10.5	14.3	6	53
8215	....do	....do	....do	168	.75	4.9	8.2	16.7	7	62
2114	Sedalia	Pettis	....do	165	.57	7.6	5.3	9.7	5	46
2115	....do	....do	....do	165	2.14	4.1	9.7	6.9	4	34

MONTANA.

2157	Anaconda	Deer Lodge	Limestone	165	0.74	7.5	5.3	13.1	3	76
1649	Bozeman	Gallatin	Sandstone	156	2.13	3.8	10.5	18.7	15	4
1651	....do	....do	Calcareous sandstone	162	1.77	3.4	11.6	16.5	15	200
8650	Billings	Yellowstone	....do	165	1.05	3.7	10.8	17.3	10	81

NEBRASKA.

2940	Cedar Creek	Cass	Limestone	165	1.19	5.4	7.4	14.9	6	50
2941	do	do	do	165	.85	5.9	6.8	15.5	6	41
2942	do	do	do	165	1.61	4.7	8.6	13.2	6	59
2943	Nehawka	do	do	165	.83	4.9	8.2	14.7	5	30
2944	do	do	do	159	2.43	5.4	7.4	11.4	6	145
360	Blue Springs	Gage	Flint	159	1.33	5.8	6.9	[2]	[2]	[2]
3091	Wymore	do	Dolomitic chert	156	3.98	11.8	3.4	[2]	[2]	16
1361	Johnson Town	Nemaha	Limestone	150	5.30	3.7	10.7	16.2	5	32
1362	do	do	do	153	4.40	10.1	4.0	4.0	4	29
1509	Auburn	do	do	159	3.12	4.4	9.0	6.2	7	84
1510	do	do	do	153	4.38	5.1	7.8	11.0	7	111

NEW HAMPSHIRE.

370	Hanover	Grafton	Very coarse granite	165	0.21	3.2	12.6	[2]	[2]	[2]
371	do	do	Hornblende schist	193	.22	3.3	12.3	[2]	[2]	[2]
372	Lebanon	do	do	190	.38	4.0	9.9	[2]	[2]	[2]
373	do	do	Biotite schist	168	.47	5.9	6.7	[2]	[2]	[2]
2102	Haverhill	do	Quartzite schist	165	.89	2.3	17.2	18.2	10	33
2020	do	do	Porphyritic diorite	187	.71	1.8	21.7	18.0	12	25
2101	do	do	Diorite	184	.87	2.5	16.3	17.2	9	17
2182	Thornton	do	Altered diabase	181	.39	2.2	18.0	16.9	19	500+
4050	Manchester	Hillsborough	Quartz	165	.15	4.0	10.0	[2]	[2]	3
5545	Merrimack	do	Sandstone	168	.71	5.9	6.7	17.5	6	29
5751	Hanover	do	Biotite gneiss	168	.55	10.3	3.9	18.0	6	62
5750	do	do	Biotite schist	168	.19	2.8	14.3	17.2	23	39
5752	do	do	Biotite granite	165	.26	3.5	11.4	18.5	9	29
9009	Milford	do	do	165	.59	3.6	11.1	18.0	8	15
8872	do	do	Granite	165	.31	4.6	8.8	[2]	8	[2]
2053	Concord	Merrimack	do	165	.47	3.6	11.0	18.5	10	34
8870	do	do	do	165	[2]	3.8	10.5	[2]	7	[2]
9036	do	do	do	165	.63	3.9	10.0	18.0	8	[2]
9037	do	do	do	165	.52	4.1	9.7	17.7	7	[2]
9031	do	do	do	165	.43	4.0	10.0	18.7	10	7
2362	Portsmouth	Rockingham	Altered rhyolite	172	.14	2.7	14.8	18.8	11	25
1779	Farmington	Strafford	Granite	165	.29	3.7	10.8	17.3	12	19

[1] Exact locality not known.

[2] Test not made.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

NEW JERSEY.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
260	Great Notch	Essex	Diabase	(1)	(1)	1.8	21.8	(1)	(1)	(1)
261	....do	....do	....do	(1)	(1)	2.2	18.6	(1)	(1)	(1)
986	Montclair	....do	Basalt	181	0.95	1.9	21.3	18.4	24	125
987	....do	....do	....do	184	.61	1.8	21.7	17.6	35	283
988	....do	....do	....do	187	.30	1.7	24.1	18.8	29	45
1718	Millburn	....do	....do	184	.10	2.0	20.0	18.0	21	120
1721	West Orange	....do	Altered basalt	184	.10	1.8	22.0	18.5	21	113
1727	Verona	....do	Basalt	181	.50	2.3	17.7	17.3	17	500+
1753	West Orange	....do	Altered basalt	187	.10	1.8	22.7	17.8	24	238
1754	....do	....do	Basalt	187	.10	1.4	27.8	17.3	28	60
1755	....do	....do	....do	184	.36	2.3	17.7	18.3	28	77
73	Guttenberg	Hudson	....do	(1)	(1)	1.3	30.4	(1)	(1)	(1)
1751	Secaucus	....do	Gabbroitic diabase	184	.12	2.8	14.2	18.3	27	92
1756	....do	....do	....do	187	.18	2.1	19.0	18.3	18	88
1773	Jersey City	....do	Olivine diabase	196	.13	2.5	16.1	18.3	19	31
251	Byram Station	Hunterdon	Basalt	(1)	(1)	1.5	26.9	(1)	(1)	(1)
253	Lambertville	....do	Hornblende granite	(1)	(1)	2.8	14.2	(1)	(1)	(1)
387	....do	....do	Altered gabbro	184	.14	2.8	14.3	(1)	(1)	(1)
903	....do	....do	Gabbroitic diabase	(1)	(1)	(1)	(1)	17.1	23	(1)
2085	Whitehouse	....do	Altered diabase	181	1.08	1.8	21.7	17.5	18	385
2786	Whitehouse	....do	....do	184	.47	2.6	15.6	18.3	27	45
2838	....do	....do	Dolomite	178	.39	3.7	10.9	17.0	10	43
2842	Califon	....do	....do	178	.37	3.3	12.2	16.3	13	15
1015	....do	....do	....do	177	.15	3.7	10.8	16.9	15	43
4026	Milford (near)	....do	Calcareous sandstone	168	.52	(1)	(1)	17.6	17	25
5233	Clinton	....do	Siliceous limestone	175	.25	3.0	13.5	17.6	25	21
5848	Middle Valley	....do	Hornblende gneiss	187	.17	2.8	14.3	18.7	26	34
5946	High Bridge	....do	Augite diorite	190	.95	3.9	10.2	18.5	16	28
6035	Flemington (near)	....do	Siliceous slate	162	.32	(1)	(1)	17.3	27	52
286	Hopewell	Mercer	Diabase	(1)	(1)	2.5	16.3	(1)	(1)	(1)
5446	Pennington	....do	Altered diabase	184	.26	3.8	10.5	17.7	17	(1)
6008	....do	....do	Gabbroitic diabase	187	.05	2.4	16.4	18.5	21	42
249	Bergen Hill	Middlesex	Gabbro	(1)	(1)	2.7	15.0	(1)	(1)	(1)
250	Wilmington	Morris	Basalt	(1)	(1)	2.0	19.6	(1)	(1)	(1)
303	Middle Valley	....do	Diabase	(1)	(1)	1.5	26.3	(1)	(1)	(1)
405	....do	....do	....do	187	.09	1.7	23.8	(1)	(1)	(1)
1708	Millington	....do	....do	187	.61	2.7	14.9	17.7	18	500+
2902	Middle Valley	....do	Altered diabase	187	.19	2.5	15.7	18.7	32	69
2280	Hibernia	....do	Quartz syenite	165	.21	3.2	12.6	18.8	12	16

5571	Montville	do	Hypersthene granite	175	.27	3.5	11.6	18.4	11	13
7194	Wharton	do	Blast-furnace slag	131	4.47	12.6	3.2	9.5	4	19
478	Wanaque	Passaic	Peridotite	200	.33	3.6	11.1	(1)	(1)	25
1713	Montclair Heights	do	Basalt	184	.28	2.1	19.0	18.8	24	92
1716	Paterson	do	do	181	.39	1.9	20.6	18.7	25	302
1717	Albion Place	do	do	184	.59	1.5	27.0	18.5	30	74
1730	Mountain View	do	do	184	.85	2.5	16.0	17.8	21	68
1731	Paterson	do	do	184	.59	1.6	24.4	18.3	31	500+
248	Rocky Hill	Somerset	Gabbro	(1)	(1)	2.1	19.4	(1)	(1)	(1)
252	Boundbrook	do	Basalt	(1)	(1)	2.2	18.6	(1)	(1)	(1)
357	Chimney Rock	do	do	187	.12	1.7	23.6	(1)	(1)	(1)
637	Somerville	do	Basalt-tuff	147	6.32	14.7	2.7	(1)	(1)	(1)
669	do	do	do	150	5.69	9.3	4.3	(1)	(1)	32
1619	Boundbrook	do	Basalt	181	1.81	1.5	26.7	19.1	27	298
2995	North Plainfield	do	do	187	.41	1.7	23.5	19.1	34	23
284	Mechanic Mountain	do	Diabase	(1)	(1)	2.0	20.0	(1)	(1)	(1)
288	Chimney Rock	do	do	(1)	(1)	1.6	24.4	(1)	(1)	(1)
1706	Warrenville	do	do	187	.33	1.8	22.0	18.3	28	70
1719	Bernardsville	do	Altered diabase	178	.24	4.0	10.1	18.5	16	143
4395	Boundbrook	do	do	181	.57	1.8	22.2	18.6	33	124
4952	Belmeade (near)	do	Diabase	187	.15	1.6	24.4	18.8	34	12
285	Rocky Hill	do	Uralitic gabbro	(1)	(1)	2.4	16.5	(1)	(1)	(1)
287	Bernardsville	do	Limestone	(1)	(1)	4.1	9.7	(1)	(1)	(1)
2205	(2)	do	Dolomite	178	.64	3.3	12.0	(1)	(1)	35
3504	Hamberg	Sussex	Altered syenite	184	.12	3.3	12.3	17.9	15	44
350	New Providence	Union	Diabase	187	.39	1.7	23.6	(1)	(1)	(1)
6585	do	do	Altered diabase	184	.45	1.5	26.0	17.9	25	264
912	Springfield	do	Basalt	181	1.15	1.7	23.3	18.6	30	174
1707	Summit	do	do	184	.32	2.2	18.0	18.3	8	225
6595	Springfield	do	do	181	.97	1.08	22.7	18.1	28	284
6586	Summit	do	Altered diabase	184	1.00	1.9	20.6	17.5	38	381
3145	Washington	Warren	Siliceous dolomite	178	.14	1.2	33.3	17.2	24	17
7436	(2)	(2)	Diabase	187	.45	1.9	21.0	18.7	22	69

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1193	Albany	Albany	Calcareous sandstone	168	0.68	2.9	13.8	17.1	20	39
4989	South Bethlehem	do	Limestone	168	.19	4.8	8.4	16.1	10	10
5673	Guilderland	do	Siliceous limestone	165	1.58	3.2	12.7	14.7	14	36
6455	(2)	Clinton	Feldspathic quartzite	168	.53	4.7	8.6	18.2	9	11
6457	(2)	do	Plagioclase gneiss	168	.49	3.9	10.4	18.0	10	10
6458	(2)	do	Pyroxene gneiss	172	.51	3.4	11.7	18.0	13	22
6929	Clinton Point	do	Limestone	175	.21	2.7	14.8	17.2	12	43
385	Hudson	Columbia	Calcareous slate	168	.40	6.9	5.8	(1)	(1)	(1)
340	do	do	Limestone	168	.50	5.3	7.6	(1)	(1)	(1)
195	Cortland	Cortland	Hypersthene gabbro	(1)	(1)	5.4	7.5	(1)	(1)	(1)
2560	Poughkeepsie	Dutchess	Dolomite	178	1.40	3.2	12.5	17.5	12	17

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

NEW YORK—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
5544	Camelot	Dutchess	Dolomite	175	.33	2.3	17.5	16.8	23	33
6764	North Hamberg	do	Siliceous dolomite	178	.24	2.3	17.1	17.3	20	41
8011	(1)	do	Dolomite	175	.29	5.0	8.0	17.6	10	317
1327	Clinton Point	do	Dolomitic sandstone	175	.21	(2)	(2)	17.5	19	35
2479	Poughkeepsie	do	Calcareous sandstone	172	.44	3.7	10.9	18.0	14	31
2480	do	do	do	172	.32	4.6	8.6	15.8	14	20
2559	do	do	Biotite gneiss	172	.21	3.3	12.0	18.3	13	28
2561	do	do	Quartzite	165	.83	2.7	14.8	(2)	(2)	3
4960	Stoneco	do	Dolomitic marble	175	.16	2.3	17.5	16.7	7	20
2939	Akron	Erie	Cherty limestone	168	.35	5.9	6.8	18.8	7	81
5225	Buffalo	do	Limestone	168	1.27	3.4	11.8	16.2	16	17
5872	(1)	do	Cherty limestone	165	.86	4.1	9.7	19.2	10	41
1783	Keeseville	Essex	Gabbro	228	.74	(2)	(2)	17.0	16	6
8577	Gloversville	Fulton	Biotite gneiss	172	.19	3.7	10.8	18.0	10	28
410	Leroy	Genesee	Flint	162	.20	7.2	5.5	(2)	(2)	(2)
732	North Leroy	do	Limestone	168	.06	4.7	8.4	(2)	(2)	52
733	do	do	do	162	.40	5.1	7.9	(2)	(2)	100
6755	Catskill	Green	Calcareous sandstone	168	.94	3.7	10.8	13.1	9	44
532	Little Falls	Herkimer	Gneiss	165	.23	1.9	20.7	(2)	(2)	14
1768	do	do	Pyroxene gneiss	181	.12	6.1	6.5	17.3	18	14
1769	do	do	Gneiss	168	.33	9.1	4.4	15.7	12	16
1771	Little Falls	do	Pyroxene gneiss	162	.13	7.6	5.3	14.7	7	45
1770	do	do	Pyroxene quartzite	187	.11	2.1	19.4	17.0	35	22
2542	Salisbury	do	do	168	.40	2.3	17.2	18.7	21	16
1853	Little Falls	do	Crystalline dolomite	175	.50	5.2	7.7	12.2	7	59
2650	Elmira	do	Limestone	147	6.29	7.4	5.4	6.3	3	43
192	Round Island	Jefferson	Gneiss	(2)	(2)	1.7	23.0	(2)	(2)	(2)
1896	Clayton	do	Granite	165	.11	2.5	16.1	18.9	14	18
7437	Alexandria Bay	do	do	165	.24	3.8	10.4	18.8	8	9
8833	do	do	do	165	(2)	(2)	(2)	19.0	14	(2)
8902	do	do	do	(2)	(2)	(2)	(2)	19.3	11	(2)
356	Brockport	Monroe	Fossiliferous limestone	168	.26	4.5	8.9	(2)	(2)	(2)
917	Honeoye Falls	do	Cherty limestone	168	.20	3.6	11.0	(2)	(2)	47
937	do	do	Nodular limestone	165	2.70	6.1	6.6	(2)	(2)	29
938	do	do	Dolomitic limestone	168	.27	3.6	11.2	15.6	9	45
918	do	do	Dolomite	159	3.26	4.1	9.8	15.1	16	19
1211	Amsterdam	Montgomery	Limestone	168	.44	2.2	17.9	16.5	18	82
1512	Pattersonville	do	Dolomitic limestone	175	1.27	2.6	15.2	15.8	15	43
1746	Amsterdam	do	Limestone	168	.22	4.8	8.4	15.2	9	54

1188	New York	New York	Phosphate rock	181	2.32	11.9	3.4	(2)	(2)	37
2819	....do	....do	Slag rock	243	.37	4.4	9.1	17.3	21	7
193	Lockport	Niagara	Medina sandstone	(2)	(2)	2.3	17.5	(2)	(2)	(2)
5224	Niagara Falls	....do	Dolomite	175	.98	2.9	13.6	15.7	18	22
1296	Syracuse	Onondaga	Limestone	172	.39	2.6	15.5	16.2	14	64
1297	....do	....do	....do	172	.31	3.3	12.0	16.2	10	88
1919	Skaneateles	....do	....do	168	1.18	4.6	8.7	9.7	7	80
1920	....do	....do	....do	168	.57	3.8	10.6	16.5	7	41
7005	Scroeppels Bridge	....do	Argillaceous limestone	162	.29	6.5	6.0	14.8	11	40
346	Geneva	Ontario	Siliceous limestone	165	1.20	2.9	13.9	(2)	(2)	(2)
347	....do	....do	Limestone	172	.17	4.5	8.8	(2)	(2)	(2)
400	Canandaigua	....do	....do	168	.16	4.6	8.8	(2)	(2)	(2)
6864	Phelps	....do	....do	175	.67	3.2	12.3	16.0	6	62
1833	Warwick Township	Orange	Diorite	190	.39	5.7	7.0	18.3	9	22
6720	Cornwall	....do	Gneissoid granite	168	.35	3.7	10.8	18.2	9	24
6772	....do	....do	Hornblende granite	165	.29	6.8	5.9	18.4	6	17
9619	Cornwall Landing	....do	Granite	165	.14	2.1	19.0	19.3	7	15
6765	Cedar Cliff	....do	Siliceous dolomite	178	.23	4.2	9.6	17.1	5	35
8908	Monroe	....do	Dolomite	178	.40	5.5	7.3	16.7	8	29
791	Florida	....do	Dolomitic sandstone	175	.10	3.7	10.9	17.4	24	(2)
3144	Highland Mills	....do	Ferruginous sandstone	165	.47	2.5	16.3	18.8	11	11
8909	Monroe	....do	Calcareous sandstone	168	1.16	3.0	13.2	18.7	19	15
8910	....do	....do	Sandstone	165	(2)	4.8	8.4	19.0	4	10
4406	Albion	Orleans	Ferruginous sandstone	156	2.33	3.9	10.3	16.0	12	23
2175	Oswego	Oswego	Pyroxene quartzite	168	.34	7.0	5.7	17.2	10	10
2176	....do	....do	Quartzite	165	.34	7.6	5.3	18.9	13	5
2177	....do	....do	Feldspathic quartzite	159	1.53	3.2	12.6	18.2	21	18
2649	Cooperstown	Otsego	Sandstone	159	1.83	(2)	(2)	14.8	12	37
8041	Garrison	Putnam	Granite	165	.28	5.1	7.8	18.7	11	10
2817	Hoosick Falls	Rensselaer	Limestone	172	.17	3.2	12.7	16.8	12	47
2818	....do	....do	....do	175	.32	3.1	12.7	17.0	11	24
2880	....do	....do	Calcareous sandstone	172	.28	2.8	14.4	18.9	20	36
5608	Brainard	....do	Feldspathic sandstone	168	.18	2.1	19.2	17.9	14	72
45	Tompkins Cove	Rockland	Siliceous limestone	175	(2)	5.1	7.8	(2)	(2)	(2)
470	....do	....do	Limestone	168	.28	5.9	6.7	(2)	(2)	(2)
127	....do	....do	....do	175	(2)	6.3	6.3	(2)	(2)	(2)
49	Haverstraw	....do	Diabase	(2)	(2)	2.7	14.9	(2)	(2)	(2)
95	Rockland Lake	....do	....do	(2)	(2)	2.3	17.8	(2)	(2)	(2)
335	....do	....do	....do	193	.51	3.0	13.2	(2)	(2)	(2)
1321	....do	....do	....do	184	.39	1.9	20.8	16.1	27	500+
1561	....do	....do	....do	184	.39	1.9	20.8	16.1	27	500+
2904	....do	....do	....do	184	.68	2.7	15.0	18.2	17	247
4401	Nyack	....do	....do	184	.28	5.1	7.9	17.7	20	117
4962	Rockland Lake	....do	Gabbroitic diabase	181	.49	3.6	15.4	18.3	33	44
4964	....do	....do	....do	184	.23	2.4	16.8	18.1	21	42
4996	Upper Nyack	....do	Diabase	187	.16	2.5	15.8	18.5	23	77
5315	Suffern	....do	Altered diabase	184	1.45	2.5	16.1	15.8	9	182
5588	Congers	....do	Gabbroitic diabase	184	.79	1.6	25.0	18.3	23	31
6480	West Nyack	....do	Altered diabase	181	.71	2.2	18.1	18.2	24	142

[1] Exact locality not known.

[2] Test not made.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

NEW YORK—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
6733	Haverstraw	Rockland	Diabase	184	.82	2.3	17.4	17.8	18	66
6734	....do	....do	....do	184	.39	2.3	17.4	18.0	23	131
6735	....do	....do	Gabbroitic diabase	184	.56	2.6	15.6	18.1	17	309
7805	(1)	....do	Diabase	187	.35	2.4	16.4	18.0	18	89
8012	(1)	....do	Gabbroitic diabase	184	.16	4.6	8.6	18.5	14	30
6774	Tompkins Cove	....do	Siliceous dolomite	178	.26	4.3	9.4	16.4	9	186
6775	....do	....do	Dolomite	175	.44	4.9	8.2	12.7	7	70
8013	(1)	....do	Siliceous dolomite	175	.26	6.9	5.8	17.2	13	13
9462	Tompkins Cove	....do	....do	175	.35	4.8	8.3	16.6	13	36
4328	Massena	St. Lawrence	....do	175	.44	4.3	9.4	16.5	16	22
4330	....do	....do	....do	175	.84	3.1	13.1	16.8	20	28
1524	Saratoga Springs	Saratoga	Hornblende gneiss	190	.28	4.7	8.5	16.9	16	41
1525	....do	....do	Altered diabase	175	.42	2.3	17.1	17.6	18	57
1689	Stillwater	....do	Feldspathic sandstone	168	.65	2.8	14.1	17.5	11	20
94	Duanesburg	Schenectady	Sandstone	(2)	(2)	3.8	10.5	(2)	(2)	(2)
188	Howes Cove	Schoharie	Limestone	(2)	(2)	4.2	9.6	(2)	(2)	(2)
1538	Cobleskill	....do	....do	168	.52	4.5	8.8	13.7	7	98
382	Deerpark	Suffolk	Sandy shale	165	1.96	4.7	8.6	(2)	(2)	(2)
1667	Smithborough	Tioga	Feldspathic sandstone	162	2.09	2.7	15.0	17.3	17	15
1100	West Camp	Ulster	Limestone	168	.26	3.0	13.2	16.9	5	61
1693	Kingston	....do	....do	172	.11	3.1	12.7	14.8	6	62
3932	Kingston (near)	....do	Siliceous limestone	168	.45	4.8	8.4	15.1	7	48
5222	Kingston	....do	Limestone	168	.33	4.0	10.0	16.8	8	22
5223	....do	....do	....do	168	.23	5.3	7.6	16.7	7	31
5574	Roundout	....do	....do	168	.39	5.0	7.9	16.4	10	65
2027	East Kingston	....do	Calcareous sandstone	168	.24	2.8	14.4	15.0	13	207
6363	Kingston	....do	Feldspathic sandstone	156	1.00	3.1	12.8	17.0	16	25
6634	Ulster	....do	Calcareous sandstone	168	.89	5.3	7.5	13.3	16	149
1257	Greenwich	Washington	Limestone	178	.21	2.2	18.2	16.7	19	26
6732	Smiths Basin	....do	Siliceous dolomite	175	.23	2.7	14.0	18.3	14	34
983	Newark	Wayne	Dolomitic limestone	159	2.10	5.3	7.5	(2)	(2)	(2)
984	....do	....do	Limestone	172	.42	4.9	8.1	12.2	(2)	41
941	Briar Cliff Manor	Westchester	Hornblende schist	190	.26	2.5	16.2	17.2	22	38
2160	Cortlandt	....do	Diorite	190	.56	3.0	13.2	16.7	10	106
2161	....do	....do	....do	184	.42	3.8	10.4	16.6	8	134
404	Bellona	Yates	Limestone	168	.14	5.3	7.5	(2)	(2)	(2)
1118	Toney	....do	....do	168	.22	4.3	9.2	17.3	9	40

822	Haw River	Alamance	Chlorite epidote schist	175	0.06	3.1	13.1	18.5	34	26
7771	Burlington	do	Altered gabbro	184	.40	3.5	11.4	16.7	9	19
825	Wadesboro	Anson	Diabase	187	.06	1.9	20.6	18.4	27	27
9226	Cramberry	Avery	Peridotite	240	.40	3.5	11.4	16.7	9	19
4991	Washington	Beaufort	Siliceous shell limestone	140	2.75	33.6	1.2	17.6	5	29
469	Asheville (near)	Buncombe	Hornblende schist	200	.15	5.7	7.1	(2)	(2)	(2)
705	Asheville	do	do	193	.57	3.6	11.0	(2)	(2)	28
778	do	do	Biotite schist	172	.09	3.4	11.8	(2)	(2)	16
627	do	do	Granite porphyry	168	.26	2.2	18.6	(2)	(2)	(2)
628	do	do	Diorite gneiss	184	.33	2.3	17.4	(2)	(2)	14
777	do	do	Granite gneiss	168	.15	3.7	10.7	(2)	(2)	15
8135	do	do	Biotite gneiss	178	.39	5.6	7.2	16.6	9	43
809	Monford (near Asheville)	do	Micro granite	165	.11	2.3	17.2	(2)	(2)	13
8133	Asheville	do	Granite	165	.31	2.8	14.3	18.4	11	14
8134	do	do	Aplitic granite	165	.24	2.2	18.4	18.7	7	12
4963	do	do	Dolomite	(2)	(2)	4.0	10.0	17.3	14	18
535	Morgantown	Burke	Basalt	190	.15	2.0	20.3	(2)	(2)	11
434	Concord	Cabarrus	Micro granite	162	.33	1.8	21.7	(2)	(2)	34
436	do	do	Augite syenite	165	.29	5.7	7.0	(2)	(2)	13
6566	do	do	do	168	.24	5.0	8.0	18.3	11	30
513	Concord (near)	do	Syenite	168	.28	2.8	14.4	(2)	(2)	27
812	Concord	do	Hornblende granite	172	.14	2.2	18.4	18.5	22	35
4717	Hickory	Catawba	Granite gneiss	168	.24	6.9	5.8	18.3	4	12
4723	do	do	do	172	.24	6.3	6.3	17.9	8	4
839	Silver City (4 miles northwest of)	Chatham	Chlorite epidote schist	175	.08	2.3	17.7	17.5	(2)	20
3382	Andrews	Cherokee	Quartzite	165	.31	4.9	8.2	19.3	15	6
3383	do	do	Marble	172	.16	6.0	6.7	14.1	3	61
6199	Murphy	do	do	172	.28	4.4	9.1	14.7	6	21
7022	Regal	do	do	171	.06	4.7	8.5	14.0	4	21
6196	Murphy	do	Mica schist	175	.43	4.1	9.7	16.2	7	12
6197	do	do	Sericite schist	172	.31	6.1	6.6	16.2	10	21
6198	do	do	Sandstone	162	.54	3.2	12.4	(2)	(2)	6
2576	Shelby	Cleveland	Biotite gneiss	175	.26	11.3	3.5	17.8	7	52
381	Newberne	Craven	Fossiliferous limestone	137	1.93	34.2	1.2	(2)	(2)	(2)
3209	Thomasville (5 miles from)	Davidson	Altered andesite	181	.49	2.7	15.0	18.3	32	17
7775	Newsom	do	Rhyolite	165	.23	2.7	14.8	19.5	20	12
8710	do	do	Altered rhyolite	175	.47	4.1	9.8	19.3	33	9
2988	Durham	Durham	Horneblende epidote schist	184	.42	(2)	(2)	17.3	14	19
813	Bethania Station	Forsythe	Olivine basalt	190	.04	3.0	13.4	18.3	39	50
1403	Winston	do	Granite gneiss	165	.08	1.9	20.4	18.5	19	1
1404	do	do	Epidote quartzite	187	.82	3.9	10.3	18.0	15	8
7561	Winston-Salem (near)	do	Granite	165	.49	5.7	7.0	17.4	5	15
838	Franklinton	Franklin	Olivine diabase	184	.35	2.7	14.9	17.4	13	153
8503	Gastonia	Gaston	Quartzite	175	.51	2.6	15.4	18.8	12	12
8882	do	do	Aplitic granite	175	.13	2.5	16.0	(2)	(2)	(2)
815	Jamestown	Guilford	Uraltic diabase	184	.11	2.1	19.1	18.1	27	26
819	Greensboro	do	Diabase	187	.14	1.6	24.7	(2)	(2)	(2)

[1] Exact locality not known.

[2] Test not made.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

NORTH CAROLINA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
816	Jamestown	Guilford	Granite	168	.15	3.4	11.7	18.0	(1)	10
817	Greensboro	do	do	172	.11	2.6	15.2	(1)	(1)	11
818	do	do	Dolomitic sandstone	178	.14	1.9	21.1	17.2	27	18
820	do	do	Gabbro	193	.21	3.5	11.6	(1)	(1)	37
821	do	do	Diorite	193	.09	2.9	13.6	(1)	(1)	21
823	do	do	do	184	.06	2.3	17.7	18.4	24	20
810	Balfour	Henderson	Granite gneiss	165	.11	3.2	12.4	(1)	(1)	12
2755	Hendersonville (2 miles northwest of)	do	do	165	.23	3.1	12.7	18.5	10	8
8576	Mooresville	Iredell	Biotite granite	168	.40	3.0	13.3	18.6	11	20
6795	Sylva	Jackson	Biotite gneiss	187	.28	6.1	6.6	17.2	8	74
6794	do	do	do	168	.33	4.3	9.3	18.4	7	24
6793	do	do	Biotite schist	184	.60	6.4	6.2	15.1	7	59
6882	Franklin	Macon	Biotite gneiss	172	.42	5.4	7.4	18.0	6	32
6883	do	do	do	172	.28	11.0	3.6	9.5	5	24
6884	do	do	do	172	.27	3.3	13.1	17.2	8	9
6977	Hewitt	do	Dolomitic marble	181	.21	6.0	6.6	15.2	10	9
504	Hot Springs	Madison	Dolomite	178	.13	4.2	9.5	(1)	(1)	(1)
772	do	do	do	178	.22	5.5	7.2	(1)	(1)	21
771	do	do	Quartzite	165	.17	3.3	12.3	(1)	(1)	(1)
867	Marion	McDowell	Biotite gneiss	168	.20	2.3	17.6	17.0	19	28
2124	Old Fort (near)	do	Sericite gneiss	172	.10	3.8	10.6	19.0	13	20
2190	Old Fort	do	Gneiss	168	.21	2.8	14.2	18.3	13	50
5373	(2)	do	Granite gneiss	168	.28	3.5	11.5	18.8	15	16
868	Marion	do	Dolomite	175	.27	4.7	8.6	(1)	(1)	21
811	Charlotte	Mecklenburg	Granite	168	.15	2.3	17.5	18.8	(1)	6
913	Toe Cane	Mitchell	Micaceous eclogite	196	.27	2.1	19.2	17.4	31	25
840	Carthage	Moore	Olivine diabase	184	.28	2.8	14.5	17.9	16	62
841	do	do	Diabase	178	.64	2.7	15.1	18.0	18	121
2768	Rocky Mountain	Nash	Granite	165	.28	3.4	11.9	18.7	18	21
7352	(2)	do	Biotite granite	165	.29	5.0	8.0	19.5	8	16
7353	(2)	do	Altered granite	162	3.00	4.9	8.2	18.8	4	28
402	Wilmington	New Hanover	Fossiliferous limestone	150	2.77	9.9	4.0	(1)	(1)	(1)
834	Chapel Hill (1½ miles east of)	Orange	Olivine basalt	187	.14	2.7	14.6	(1)	(1)	102
835	Hillsboro (1 mile southwest of)	do	Altered diabase	184	.08	1.4	29.6	18.9	50	44
2465	Lynn	Polk	Granite	165	.67	4.1	9.9	17.5	8	28
2753	Tryon	do	Biotite granite	165	.36	5.8	6.9	16.5	10	14
5430	Rockliff	do	Granite gneiss	172	.33	6.6	6.1	17.8	(1)	18
514	Asheboro	Randolph	Felsite	168	.02	1.9	21.3	(1)	(1)	33
826	Rockingham	Richmond	Hypersthene gabbro	187	.04	3.2	12.3	16.4	14	17
4109	Ruffin	Rockingham	Granite gneiss	162	.47	4.3	9.2	18.8	12	16

5956	Stacey	do	do	165	.20	2.4	16.5	19.3	14	14
5449	do	do	Micro granite	165	.19	2.2	18.0	18.8	16	10
808	Granite Quarry Station	Rowan	Granite	165	.12	1.9	20.8	(1)	(1)	(1)
1149	Salisbury	do	do	165	.31	2.6	15.1	(1)	(1)	20
2189	Granite Quarry	do	do	165	.19	2.3	17.2	19.0	17	19
2385	do	do	do	165	.25	2.4	16.5	18.7	13	11
5496	Salisbury	do	do	(1)	(1)	(1)	(1)	18.8	13	(1)
5719	do	do	do	(1)	(1)	(1)	(1)	19.4	14	(1)
6414	do	do	do	(1)	(1)	2.6	15.5	(1)	(1)	(1)
7440	do	do	do	165	.26	3.2	12.4	19.0	9	8
5629	do	do	Altered syenite porphyry	(1)	(1)	(1)	(1)	19.2	21	(1)
9618	do	do	Granite	162	.31	2.9	13.8	19.3	10	20
7560	Bear Poplar	do	Hypersthene gabbro	181	.34	3.9	10.3	18.5	7	5
6071	Bostic	Rutherford	Biotite gneiss	168	.28	8.0	5.0	17.3	6	11
5866	New London	Stanley	Epidosite	172	.23	2.7	15.0	18.7	29	17
5867	do	do	Steatite soapstone	178	1.50	6.9	5.8	4.3	6	28
5868	do	do	do	159	2.52	9.8	4.1	(1)	(1)	100
764	Elkin	Surry	Hornblende schist	187	.20	4.4	9.1	(1)	(1)	28
814	Mount Airy (1½ miles northeast)	do	Granite	165	.23	4.3	9.3	(1)	(1)	27
5497	Mount Airy	do	do	(1)	(1)	(1)	(1)	17.8	8	(1)
7433	do	do	do	165	.33	6.0	6.7	19.7	4	20
8816	do	do	do	165	.27	4.2	9.5	18.2	7	10
8295	Hewitts	Swain	Dolomite	178	.34	3.9	10.3	12.5	3	39
1787	Lake Toxaway	Transylvania	Biotite gneiss	165	.43	4.5	9.0	18.3	10	15
1788	do	do	do	162	.96	6.3	6.4	12.7	10	25
1789	do	do	Hornblende schist	187	1.26	7.0	5.7	9.8	7	38
6301	Monroe	Union	Sandstone	172	.40	2.7	15.0	12.5	11	18
1274	Henderson	Vance	Granite gneiss	165	.31	3.8	10.4	17.4	7	14
6900	Middlebury	do	do	165	.19	4.5	8.9	18.3	7	16
8927	do	do	do	165	.52	2.6	15.3	18.2	6	12
1275	Henderson	do	Granite	165	.40	(1)	(1)	17.3	7	16
1276	do	do	do	165	.33	3.9	10.4	17.5	6	11
1277	do	do	Gneissoid granite	165	.38	5.0	8.1	16.6	8	11
8419	Granita (near)	Wake	Biotite granite	165	.38	3.0	13.3	19.0	7	22
3807	Wise	Warren	Pink granite	165	.15	2.7	14.8	18.9	8	14
3808	do	do	White granite	165	.20	2.3	17.2	18.8	12	7
6901	do	do	Biotite granite	165	.24	4.3	9.2	18.6	9	10
6284	North Wilkesboro	Wilkes	Mica gneiss	175	.15	3.9	10.3	17.5	8	31
431	Elm City (2 miles northeast of)	Wilson	Gray granite	165	.37	2.8	14.2	(1)	(1)	(1)
432	Wilson (3 miles south of)	do	Reddish granite	165	.38	6.4	6.2	(1)	(1)	(1)
433	Wilson (4 miles southwest of)	do	do	162	.22	5.6	7.2	(1)	(1)	(1)
2178	Wilson	do	Granite	165	.14	5.6	7.2	17.9	4	24
2179	do	do	Biotite granite	162	.97	9.8	4.1	17.5	4	30
2181	do	do	do	165	.50	5.2	7.7	17 9	6	32
2184	do	do	Granite	165	.43	4.7	8.4	18.5	7	25
3944	do	do	Biotite granite	165	.49	10.0	4.0	18.2	6	25
9038	Neverson	do	Granite	165	.41	4.6	8.7	19.0	10	13
5374	(2)	Yancy	Quartzite	165	.30	3.1	13.0	19.3	14	8
7589	(2)	do	Biotite schist	184	.27	(1)	(1)	19.2	6	32
6589	(2)	(2)	Feldspathic quartzite	168	.11	2.3	17.2	19.2	53	27

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

OHIO.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
6093	Liman	Allen	Dolomite	165	2.24	4.0	10.0	15.5	11	18
9438	do	do	Argillaceous dolomite	168	2.10	2.9	13.8	15.6	7	36
3186	Jefferson	Ashtabula	Sandstone	153	2.37	10.0	4.0	9.2	5	20
977	Urbana	Champaign	Calcareous sandstone	159	3.60	11.4	3.5	7.3	7	32
978	do	do	do	159	3.90	32.8	1.2	.0	5	20
4692	Springfield	Clark	Dolomite	168	1.59	6.8	5.9	11.3	4	(1)
4695	do	do	do	168	.60	6.7	6.0	14.0	9	(1)
4694	Osborne	do	Dolomitic limestone	168	.31	6.2	6.4	9.3	4	(1)
5247	Melvin	Clinton	Dolomite	162	2.11	6.8	5.9	13.3	7	21
6718	Leetonia	Columbiana	Blast furnace slag	(1)	(1)	11.8	3.4	13.8	3	400
8597	do	do	do	(1)	(1)	13.1	3.1	(1)	(1)	83
1309	Coshocton	Coshocton	Limestone	168	1.10	3.5	11.3	16.2	19	71
765	Chagrin Falls	Cuyahoga	Sandstone	156	4.10	4.4	9.8	(1)	(1)	307
9459	Cleveland	do	Granite	165	.15	2.9	13.8	18.5	10	(1)
9282	do	do	do	(1)	(1)	(1)	(1)	19.0	12	(1)
9283	do	do	do	(1)	(1)	(1)	(1)	18.8	8	(1)
9284	do	do	do	(1)	(1)	(1)	(1)	18.6	9	(1)
9285	do	do	do	(1)	(1)	(1)	(1)	18.8	11	(1)
1570	Warrenville	do	Limestone	162	1.79	7.5	5.3	12.4	6	34
1944	Sandusky	Erie	do	165	1.75	4.3	9.3	13.7	7	41
1989	do	do	do	165	1.33	4.9	8.2	9.7	6	65
1990	do	do	do	168	1.30	3.5	11.4	14.0	7	94
2979	do	do	do	168	1.33	3.8	10.5	13.1	8	58
4378	do	do	do	165	1.46	4.4	9.0	10.4	8	25
5554	do	do	do	168	1.05	3.9	10.2	17.3	10	17
5753	Castallia	do	Dolomitic limestone	165	1.85	5.6	7.2	13.9	7	38
6055	do	do	Limestone	172	.50	5.5	7.3	13.7	7	41
6056	Akron Junction	do	Cherty limestone	168	.20	5.3	7.6	19.5	10	27
2895	Wilmer	do	Calcareous sandstone	153	4.70	6.8	5.9	7.8	5	66
663	Columbus	Franklin	Limestone	159	3.25	6.7	6.0	(1)	(1)	29
664	do	do	do	162	1.70	6.9	5.8	(1)	(1)	59
666	do	do	do	156	2.60	3.8	10.6	(1)	(1)	74
2896	do	do	do	168	.69	3.8	10.5	15.9	6	55
3077	do	do	do	165	1.58	3.1	12.8	17.0	6	105
3356	Marble Cliff	do	do	165	1.45	4.0	10.1	16.0	10	96
3766	Columbus	do	do	168	.98	4.3	9.3	15.5	9	61
5505	Marble Cliff	do	do	162	1.22	3.6	11.2	(1)	11	31
5506	do	do	do	162	2.14	7.2	5.6	(1)	7	31
5861	Columbus	do	do	165	1.05	3.8	10.4	14.5	6	39

5630	....do	....do	Ferruginous sandstone	(1)	(1)	(1)	(1)	16.5	11	(1)	
2449	(2)	....do	Calcareous sandstone	162	1.34	3.1	12.9	12.8	12	56	
665	Columbus	....do	Dolomite	159	2.68	5.7	7.0	(1)	(1)	(1)	
3179	Xenia (near)	Greene	Limestone	165	.79	7.8	5.1	8.3	5	29	
3370	Xenia	....do	....do	165	.62	7.2	5.6	13.5	6	39	
3180	Xenia (near)	....do	Sandstone	175	1.36	4.7	8.5	15.3	8	33	
3182	....do	....do	Dolomite	168	1.28	(1)	(1)	14.8	8	44	
4308	Jamestown	....do	....do	159	1.39	11.0	3.6	12.7	5	23	
5475	Xenia	....do	....do	159	3.56	7.1	5.6	12.3	5	14	
3522	Senecaville	Guernsey	Limestone	168	.27	5.6	7.2	17.2	10	60	
5849	Findlay	Hancock	Dolomite	168	2.42	3.3	12.3	16.3	19	25	
4693	Patterson	Hardin	....do	165	.77	(1)	(1)	13.3	4	(1)	
5553	Dunkirk	....do	....do	165	2.78	3.5	11.5	15.1	16	25	
9227	....do	....do	Argillaceous dolomite	168	2.56	4.0	10.0	15.8	11	46	
4707	Hillsboro	Highland	Chert limestone	165	2.88	5.5	7.2	11.8	6	(1)	
1986	Logan	Hocking	Argillaceous sandstone	156	5.14	6.0	6.6	.0	6	317	
1987	....do	....do	Limestone	168	1.06	4.5	8.8	11.3	6	195	
8347	Clarksfield	Huron	Calcareous sandstone	153	3.95	(1)	(1)	10.7	5	28	
9233	Bellevue	....do	Argillaceous limestone	159	3.75	6.7	6.0	8.3	4	16	
9162	Jackson	Jackson	Blast furnace slag	178	.64	4.3	9.3	16.8	7	21	
9408	Ironton	Lawrence	....do	172	1.53	6.5	6.2	16.6	7	71	
2516	Newark	Licking	Chert	156	1.97	3.4	11.7	(1)	(1)	7	
2635	Flint Ridge	....do	Limestone	165	1.19	4.3	9.2	18.1	7	97	
1655	Bellefontaine	Logan	Dolomite	153	6.91	8.7	4.6	(1)	(1)	19	
582	East Liberty	....do	Dolomitic limestone	175	.83	3.8	10.6	(1)	(1)	46	
1687	Bellefontaine	....do	Limestone	156	4.02	9.6	4.2	13.7	8	85	
4656	Big Springs	....do	Argillaceous limestone	156	5.03	5.6	7.1	9.5	6	(1)	
345	Lorain	Lorain	Blast furnace slag	143	4.10	8.3	4.8	(1)	(1)	(1)	
2787	....do	....do	....do	168	1.31	8.6	4.6	17.0	5	26	
7474	....do	....do	Smelter slag	(1)	(1)	2.3	17.7	18.2	9	137	
8988	....do	....do	Blast furnace slag	165	2.52	10.6	3.8	13.2	4	118	
1184	Toledo	Lucas	Dolomite	165	.83	4.8	8.3	14.2	10	17	
3734	Silica	....do	....do	162	2.76	5.0	8.1	15.7	8	19	
3735	Holland	....do	....do	172	1.50	6.8	5.9	13.7	7	17	
3938	....do	....do	....do	175	.45	4.1	9.8	17.7	14	17	
4995	(2)	....do	....do	172	1.74	3.1	12.9	(1)	(1)	27	
5754	Vulcan	....do	....do	172	1.23	4.5	8.9	16.9	12	24	
5756	Holland	....do	Cherty dolomite	168	2.78	4.9	8.2	18.8	9	43	
6057	....do	....do	Argillaceous dolomite	168	2.28	5.8	6.9	11.3	6	15	
6084	Waterville	....do	Dolomite	168	2.05	2.3	17.7	15.0	15	20	
8402	(2)	....do	....do	172	.92	(1)	(1)	13.0	(1)	27	
4342	Toledo	....do	Limestone	165	2.26	8.0	5.0	6.8	5	64	
6054	Vulcan	....do	Siliceous limestone	168	1.09	4.2	9.6	15.7	12	29	
1352	Youngstown	Mahoning	Limestone	168	.13	4.4	9.1	(1)	(1)	26	
3449	....do	....do	Blast furnace slag	175	1.23	7.1	5.6	18.3	(1)	45	
7648	....do	....do	....do	137	4.50	8.1	4.9	14.3	5	86	
4400	Marion	Marion	Limestone	162	3.29	3.1	13.1	12.2	7	63	
4423	....do	....do	Sandstone	153	2.66	4.2	9.6	17.2	8	25	
1747	Ludlow Falls	Miami	Limestone	172	.28	5.0	7.9	16.0	9	58	
2457	....do	....do	....do	168	2.70	5.3	7.6	11.9	7	54	

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

OHIO—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
3714	Piqua	Miami	Limestone	168	.15	6.0	6.7	12.1	5	18
5880	....do	....do	Crystalline limestone	172	.52	6.2	6.5	11.6	5	45
2015	Ludlow Falls	....do	Dolomite	172	.77	3.8	10.6	14.7	11	179
5891	Covington	....do	....do	172	1.84	3.8	10.4	12.4	8	29
5862	Piqua	....do	Marble	165	.92	7.8	5.2	5.6	3	23
1179	Madison Township	Montgomery	Limestone	165	.74	10.2	3.9	11.2	7	101
1732	Dayton	....do	....do	175	.63	3.9	10.2	15.2	12	72
1763	....do	....do	....do	162	.51	8.7	4.6	12.0	9	58
3257	Centerville	....do	....do	165	.70	6.2	6.5	9.3	5	60
3369	....do	....do	....do	168	.96	7.4	5.4	14.8	6	46
1180	Butler Township	....do	Dolomite	165	1.22	7.5	5.4	14.8	10	48
7126	Zanesville	Muskingum	Sandstone	153	2.10	43.9	.9	.0	1	(1)
8270	Gratiot	....do	Siliceous limestone	162	1.72	4.2	9.5	18.3	13	95
779	Oak Harbor	Ottawa	Dolomite	175	.21	6.1	6.5	(1)	(1)	31
778	....do	....do	Limestone	165	.93	8.1	5.0	(1)	(1)	(1)
3541	White Rock	....do	Dolomite	175	.67	4.2	9.4	15.7	11	12
5757	....do	....do	....do	168	1.40	5.8	6.8	15.5	10	18
6052	....do	....do	....do	172	1.03	5.9	6.8	14.7	5	24
6690	Freedom Township	Portage	Limestone	165	1.39	4.6	8.7	15.1	13	46
6692	Atwater	....do	....do	168	1.11	4.7	8.5	17.4	8	49
6790	Palmyra Township	....do	Ferruginous sandstone	153	5.70	10.0	4.0	(1)	(1)	54
7118	....do	....do	....do	150	1.57	21.4	1.9	1.3	2	23
2893	New Paris	Preble	Limestone	175	.32	4.3	9.4	17.9	7	68
3181	New Paris (near)	....do	Dolomite	172	.98	3.6	11.0	15.3	13	29
5930	Lewisburg	....do	Argillaceous dolomite	159	5.55	7.2	5.6	2.3	4	159
5980	New Paris	....do	Dolomite	175	.47	2.6	15.4	15.8	14	28
3183	(2)	Ross	Sandstone	165	3.69	(1)	(1)	15.8	11	16
4889	Bellevue	Sandusky	Limestone	165	.95	4.1	9.9	12.3	6	22
5090	....do	....do	....do	168	.97	6.3	6.4	14.8	10	35
5091	....do	....do	....do	172	1.46	4.2	9.5	16.4	14	32
1856	(2)	Seneca	Dolomite	165	1.29	6.9	5.8	13.8	6	75
2042	(2)	....do	....do	172	.96	6.7	6.0	15.3	7	49
5092	(2)	....do	....do	172	.55	10.8	3.7	12.4	4	54
7789	Fostoria	....do	Argillaceous dolomite	171	1.30	5.0	8.0	15.3	7	46
7776	....do	....do	Dolomite	168	1.43	7.8	5.1	11.2	6	18
2477	Bloomville	....do	Argillaceous limestone	168	2.25	3.3	12.0	15.2	18	26
2478	....do	....do	Limestone	172	.37	4.3	9.3	12.8	9	32
2532	Republic (near)	....do	....do	168	2.12	4.5	8.8	15.3	8	43
5556	Bloomville	....do	....do	168	1.00	3.6	11.0	12.5	6	22

9281	....do	....do	....do	156	3.33	4.3	9.3	13.5	7	20
2663	North Industry	Stark	....do	168	.55	3.9	10.2	15.8	9	24
2833	Twinsburg	Summit	Sandstone	153	4.33	5.2	7.8	13.8	14	26
828	Howland Township	Trumbell	....do	162	.80	3.1	13.0	(1)	8	21
6710	Canal Dover	Tuscarawas	Blast furnace slag	(1)	(1)	16.5	2.4	11.4	5	300
4399	White Sulphur	Union	Limestone	165	1.31	6.1	6.6	13.2	10	53
5555	Middlepoint	Van Worth	Dolomite	172	.76	5.3	7.5	16.3	13	16
6116	Willshire	....do	....do	159	1.05	11.5	3.5	9.2	4	20
4307	Cold Springs	Warren	....do	162	3.59	9.1	4.4	11.4	6	21
4691	Carey	Wyandot	....do	165	1.34	5.9	6.8	8.8	3	(1)

OKLAHOMA.

4352	Chockie	Atoka	Chert	162	0.65	2.7	14.9	19.2	25	21
5853	Stringtown (near)	....do	....do	153	2.91	6.3	6.4	18.8	5	20
5982	....do	....do	Weathered chert	159	1.72	7.4	5.4	(1)	(1)	29
6374A	Chockie	....do	Chert	162	.52	4.5	8.9	(1)	(1)	61
6374B	....do	....do	Limestone	168	.73	(1)	(1)	16.0	7	78
9464	Stringtown	....do	Argillaceous limestone	162	1.90	4.3	9.3	18.8	(1)	55
2950	Watonga	Blaine	Gypsum	143	3.34	38.2	1.0	4.8	4	500+
3347	....do	....do	Dolomite	168	1.16	5.5	7.3	16.8	13	50
4366	Richards Spur	Comanche	Limestone	168	.20	4.0	10.0	16.6	6	36
4703	Fort Sill	....do	....do	168	.54	(1)	(1)	13.7	5	16
4704	....do	....do	....do	162	1.12	(1)	(1)	14.8	6	18
5251	Richards Spur	....do	....do	168	.62	3.9	10.4	16.2	9	26
4705	Fort Sill	....do	Altered rhyolite	162	1.14	(1)	(1)	18.7	15	11
4365	Cement	Grady	Siliceous limestone	165	.66	4.1	9.9	16.2	7	78
4368	Granite City	Greer	Granite porphyry	165	.12	2.5	15.7	19.3	21	10
4369	....do	....do	Hornblende granite	165	.20	6.3	6.3	18.7	8	10
4370	....do	....do	....do	165	.20	3.8	10.5	19.0	9	13
4356	Ravia	Johnston	Bituminous limestone	135	2.69	4.0	10.0	3.2	6	500+
6034	(2)	....do	Limestone	165	.53	4.4	9.0	15.5	7	30
6028	(2)	....do	....do	162	.81	5.7	7.0	14.7	10	48
7496	Wapanucka	....do	....do	156	2.74	5.6	7.1	(1)	(1)	83
4353	Tishomingo	....do	Biotite granite	165	.06	6.0	6.7	19.2	8	17
4355	Ravia	....do	Granite	162	.18	3.3	12.0	19.0	9	15
5590	....do	....do	Weathered granite	162	.39	4.2	9.6	(1)	(1)	14
4354	Tishomingo	....do	Diabase	190	.14	4.1	9.7	18.8	25	31
4346	Ponca City	Kay	Clay limestone	143	5.06	(1)	(1)	.0	3	17
4347	....do	....do	Limestone	153	3.77	5.7	7.0	8.3	5	47
4348	Newkirk	....do	Clay limestone	143	6.79	9.9	4.0	0.0	4	60
4349	Uncas	....do	Shell, limestone	150	5.29	9.3	4.3	0.0	3	54
5142	Ponca City	....do	Limestone	156	2.91	(1)	(1)	13.2	7	32
5143	....do	....do	....do	156	3.03	(1)	(1)	12.3	5	38
5144	....do	....do	....do	150	5.50	(1)	(1)	11.0	5	28
5145	....do	....do	....do	150	4.65	(1)	(1)	8.6	5	38
5325	....do	....do	....do	156	3.20	6.1	6.5	8.6	5	22
4367	Cold Springs	Kiowa	Diorite	178	.24	2.8	14.3	18.8	22	25

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

OKLAHOMA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
3872	Madill	Marshall	Limestone	162	2.54	4.9	8.2	13.0	5	27
6077	Garvin	McCurtain	do	156	1.98	10.0	4.0	.0	4	8
4359	Dougherty	Murray	Bituminous limestone	156	.86	4.2	9.6	(1)	(1)	500+
4362	Crusher	do	Limestone	168	.24	4.4	9.2	15.1	8	36
5376	do	do	do	172	.33	3.5	11.6	14.8	7	23
4383	Avant	Osage	do	162	2.23	5.7	7.0	12.3	4	32
5425	Ripley	Payne	Dolomite	175	.59	4.6	8.7	14.6	7	44
4350	Hartshorne	Pittsburg	Limestone	168	.31	(1)	(1)	16.8	8	38
4351	do	do	do	165	1.14	4.4	9.1	16.6	13	132
4364	Ada	Pontotoc	Fossiliferous limestone	165	.41	9.0	4.4	8.2	3	42
8856	Fitzhugh	do	do	159	2.22	16.7	2.4	6.7	2	20
8857	do	do	do	168	.69	12.0	3.3	17.7	7	13
5693	Tuskahoma	Pushmataha	Calcareous chert	162	.45	5.8	6.9	19.4	6	40
3717	Tulsa	Tulsa	Sandstone	159	3.17	9.6	4.1	14.2	13	112
6468	Dewey	Washington	Limestone	165	1.37	5.0	8.0	17.3	5	42
			OREGON.							
2920	St. Helens	Columbia	Basalt	175	1.80	1.8	22.7	18.8	22	17
7357	Griffen Creek	Jackson	Altered basalt breccia	181	.38	1.8	22.7	18.5	24	33
980	Eugene (near)	Lane	Basalt	168	2.30	5.9	6.8	7.9	7	(1)
982	do	do	Olivine basalt	184	.72	2.8	14.3	10.7	6	225
7004	(2)	do	Volcanic breccia	172	3.23	(1)	(1)	17.0	4	175
1766	Salem	Marion	Basalt	175	.83	3.9	10.4	18.0	38	15
1135	Troutdale	Multnomah	do	168	2.32	3.7	10.8	16.0	19	24
1136	Portland (near)	do	do	162	2.27	6.8	5.9	15.8	20	49
1137	do	do	do	172	2.01	3.8	10.6	16.4	26	99
1454	Newberg	do	do	172	1.64	(1)	(1)	18.4	30	5
7319	(2)	do	Basalt tuffa	150	5.82	31.4	1.3	(1)	(1)	400
2070	Pendleton	Umatilla	Basalt	178	2.22	2.1	19.4	17.9	20	193
3758	Hillsboro	Washington	Olivine basalt	168	1.89	4.3	9.3	17.2	12	6
5354	(2)	do	Basalt	165	1.26	4.2	9.4	17.9	15	6

1177	Bittinger	Adams	Limestone	172	0.20	4.9	8.2	14.2	9	64
2549	Cumberland	do	do	165	1.25	2.0	20.4	17.2	25	36
6069	Hanover (near)	do	do	175	.21	4.1	9.7	16.0	7	22
7670	(2)	do	Siliceous limestone	178	.21	3.5	11.2	17.7	9	24
1178	Bittinger	do	Feldspathic sandstone	168	.94	3.7	10.8	12.2	7	48
1950	Abbotstown	do	Sandstone	162	.81	3.2	12.7	18.9	8	27
2245	Cumberland	do	do	153	2.95	(1)	(1)	17.1	12	57
1483	Littleton	do	Slate	168	1.55	(1)	(1)	11.1	12	27
1486	do	do	do	165	2.10	(1)	(1)	1.1	7	101
1611	Oxford Township	do	Dolomite	172	.43	3.9	10.2	17.7	16	42
1612	Berwick Township	do	Quartzite	162	.60	4.0	10.1	18.3	5	4
1814	Menallen Township	do	Rhyolite	165	.22	2.0	19.8	19.6	42	13
1815	do	do	do	162	.35	1.9	21.1	19.5	34	22
1949	Hanover (near)	do	Chlorite schist	181	1.03	6.6	6.1	(1)	(1)	46
2125	(2)	do	Altered basalt	175	2.38	2.9	13.8	17.0	10	500+
2171	Floradale	do	do	181	1.18	2.0	20.4	18.2	9	260
2244	Cumberland	do	Diabase	187	.91	(1)	(1)	18.6	24	19
8705	Granite Station	do	Hypersthene diabase	190	.39	3.8	10.5	18.7	12	15
6881	do	do	Gabbroitic diabase	193	.25	2.5	16.0	17.9	8	20
5392	(2)	do	Marble	168	.32	4.7	8.5	12.4	5	42
6064	Hanover (near)	do	do	168	.11	4.0	10.0	14.7	8	20
6089	do	do	do	168	.37	5.8	6.9	13.3	3	21
7499	do	do	do	168	.37	5.1	7.9	11.0	6	66
2447	Duquesne	Allegheny	Slag	131	4.40	6.4	6.2	17.3	9	46
3168	Munhall	do	do	206	2.36	4.9	8.1	(1)	(1)	500+
1072	Pittsburgh	do	Siliceous limestone	168	.21	(1)	(1)	17.0	13	97
2118	Oakdale	do	Limestone	172	.29	4.2	9.5	16.4	7	64
2180	Coraopolis (near)	do	do	165	.83	5.9	6.7	16.7	12	37
2152	Pittsburgh	do	do	172	.60	(1)	(1)	16.6	9	49
5546	do	do	do	168	.27	4.5	8.9	15.3	3	19
6686–1	do	do	Siliceous slate	172	.41	(1)	(1)	19.0	29	(1)
6686–2	do	do	Pyroxene gneiss	181	.42	(1)	(1)	18.1	8	(1)
1357	Ford City	Armstrong	Limestone	168	.26	5.0	8.0	(1)	(1)	55
1358	do	do	do	168	.58	4.0	10.0	16.4	17	30
2096	Kittanning	do	do	165	1.21	4.8	8.3	15.5	8	83
2159	Franklin	do	do	165	1.14	4.1	9.8	15.0	7	62
2296	Kittanning	do	do	168	.35	4.9	8.2	15.7	8	57
2551	Craigville (near)	do	do	172	.46	4.7	8.5	16.2	7	37
2552	East Brady	do	do	165	1.04	(1)	(1)	15.5	7	42
2696	Kittanning	do	do	165	.79	4.8	8.3	16.4	9	48
3723	Templeton	do	do	168	.52	5.1	7.8	14.8	6	25
4671	Apollo	do	do	168	.23	6.3	6.3	15.8	6	42
2906	Freeport	do	Siliceous limestone	168	.58	2.9	13.6	16.6	9	109
2716	Beaver	Beaver	Limestone	168	.72	6.7	6.0	14.7	6	35
2066	Bedford	Bedford	do	168	.72	4.3	9.3	16.5	7	110
2752	Waterside	do	do	172	.31	3.5	11.4	16.7	10	61

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

PENNSYLVANIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
3851	Hyndman	Bedford	Limestone	172	.45	3.4	11.8	17.2	15	63
5602	....do	....do	Impure limestone	168	.22	2.9	13.7	14.3	6	39
5603	....do	....do	Siliceous limestone	168	.22	4.1	9.7	16.5	10	45
2194	Bloomfield Township	....do	Quartzite	156	1.39	4.6	8.7	17.4	9	12
2331	South Woodbury Township	....do	Dolomite	178	.83	3.4	11.9	15.8	11	24
1702	(1)	Berks	Quartzite	162	.47	2.5	15.7	(2)	(2)	7
1947	Birdsboro	....do	Diabase	184	.74	1.9	20.8	18.0	12	69
2248	Bally	....do	....do	187	.45	2.7	15.0	18.2	10	52
5573	Bechtelsville	....do	Gabbroitic diabase	184	.81	3.9	10.3	18.3	12	37
5585	Birdsboro	....do	Diabase	184	.14	2.0	20.0	18.0	26	33
5626	Birdsboro (near)	....do	....do	187	.40	2.4	16.8	18.8	17	66
7414	Douglassville	....do	Altered diabase	187	.41	2.8	14.1	18.5	19	104
8786	Trap Rock Station	....do	Gabbroitic diabase	184	.59	3.2	12.5	17.9	10	36
5632	Birdsboro (2½ miles south of)	....do	Altered diabase	184	.34	2.0	19.8	18.2	21	59
1983	Seisholtzville	....do	Granite	168	.35	3.2	12.7	18.0	18	23
5361	Reading	....do	Hornblende granite	172	1.05	2.0	20.0	18.3	24	37
8243	Barto	....do	Weathered granite	162	.82	(2)	(2)	19.0	10	83
2033	....do	....do	Altered diorite	209	.71	2.3	17.1	18.7	16	50
8242	....do	....do	....do	197	.61	2.4	16.5	19.0	12	30
2192	(1)	....do	Slate	172	.54	1.6	24.4	18.4	40	35
3121	(1)	....do	Clay slate	168	.33	2.0	19.6	18.8	56	29
2659	Monocacy	....do	Gabbro	184	.67	2.4	16.4	18.6	19	72
2660	....do	....do	Altered gabbro	181	.75	5.9	6.8	(2)	(2)	115
2661	....do	....do	Gabbro	190	.37	2.2	18.2	18.2	13	14
3434	Birdsboro	....do	....do	187	.47	1.5	26.7	18.6	9	31
3435	Birdsboro (near)	....do	....do	184	.67	1.8	21.7	18.6	23	15
2949	Birdsboro	....do	Slag	125	4.26	11.8	3.4	10.7	4	44
3122	(1)	....do	Argillaceous sandstone	159	3.48	2.0	20.2	18.7	36	194
3167	Douglass Township	....do	Sandstone	175	.63	2.5	16.0	17.3	38	43
5569	(1)	....do	Ferruginous sandstone	168	.43	1.6	24.7	19.2	35	34
5720	Little Oley	....do	....do	156	2.34	1.8	21.7	18.2	35	36
3385	Reading	....do	Dolomite	168	.12	3.6	11.1	16.2	11	29
8985	....do	....do	Argillaceous dolomite	168	.39	3.3	12.3	17.7	5	31
9615	....do	....do	Dolomite	178	.42	5.7	7.0	(2)	(2)	19
7413	Douglassville	....do	Altered basalt breccia	168	1.12	1.4	29.4	19.3	34	27
7610	Lyons	....do	Weathered chert	156	2.66	5.4	7.4	(2)	(2)	0
2034	Altoona (near)	....do	Limestone	168	.63	5.4	7.5	11.3	8	57
2384	Altoona	....do	....do	168	.39	3.2	12.5	14.2	7	27

2406	....do	....do	....do	168	.32	2.8	14.5	16.7	11	55
2407	....do	....do	....do	168	.91	4.3	9.3	15.3	6	49
2421	Cartarme Township	....do	Siliceous limestone	168	.46	3.6	11.2	16.7	22	45
2432	Allegheny Township	....do	Limestone (siliceous)	168	.35	4.9	8.2	13.7	5	49
2483	Hollidaysburg	....do	Limestone	172	.49	3.7	10.7	17.3	20	51
2484	....do	....do	....do	172	.80	3.0	13.2	17.1	16	22
2839	(1)	....do	....do	168	.10	3.2	12.5	16.5	11	47
8724	Juniata	....do	Crystalline limestone	168	.40	6.0	6.8	13.7	4	(2)
8725	(1)	....do	Argillaceous limestone	168	.45	6.0	6.8	(2)	(2)	(2)
8722	(1)	....do	Feldspathic sandstone	165	.81	(2)	(2)	18.2	11	(2)
1601	Hollidaysburg	....do	Sandstone	162	.63	2.3	17.4	18.5	12	3
2482	....do	....do	Dolomite	172	.84	3.3	12.0	17.2	11	27
2492	Tyrone Township	....do	....do	178	.26	3.1	13.0	16.5	10	36
3745	Logan Township	....do	....do	178	.41	3.3	12.2	16.8	10	23
2068	Wells	Bradford	Siliceous limestone	168	.63	3.5	11.3	15.9	14	39
2419	Wyalusing Township	....do	Limestone	168	.64	4.3	9.4	15.2	7	50
2535	....do	....do	....do	168	.39	3.7	10.8	16.3	4	54
3080	Camptown	....do	....do	168	.68	4.2	9.5	15.2	8	25
3119	Wysox Township	....do	Siliceous limestone	168	.84	3.9	10.2	16.0	9	42
3120	....do	....do	....do	168	.49	3.1	12.7	16.7	12	32
3123	....do	....do	Limestone	168	.26	5.3	7.6	14.3	7	35
3241	Shores Hill	....do	Siliceous limestone	162	1.51	4.2	9.6	15.6	8	45
3715	Sheshequin Township	....do	Limestone	168	.22	6.7	6.0	16.0	10	35
3716	....do	....do	....do	165	.32	5.3	7.6	16.8	11	40
3719	Rome Township	....do	....do	168	.20	3.7	10.9	17.8	16	49
3802	Wysox Township	....do	....do	168	.24	3.3	12.1	17.0	13	27
7730	East Smithfield	....do	Fossiliferous limestone	168	.40	6.8	5.9	15.7	10	35
2069	Wells	....do	Feldspathic sandstone	165	.86	(2)	(2)	17.2	25	31
3097	Wysox Township	....do	Calcareous sandstone	165	.89	2.9	13.8	17.3	9	54
2541	Wyalusing Township	....do	Fossiliferous dolomite	168	.63	4.7	8.5	17.9	22	132
731	Rock Hill	Bucks	Diabase	193	.12	1.2	34.5	(2)	(2)	(2)
5408	Lahaska	....do	Gabbroitic diabase	184	.17	2.0	19.8	18.5	16	27
6359	(1)	....do	....do	184	.33	2.0	20.0	17.5	21	58
8660	Rock Hill	....do	Hypersthene diabase	190	.29	3.7	10.8	(2)	(2)	30
3200	Shelly	....do	Diabase	187	.34	2.4	16.5	18.3	19	8
5386	New Hope	....do	....do	184	.33	2.2	17.9	18.5	22	23
855	(1)	....do	Granite gneiss	168	.10	3.0	13.2	(2)	(2)	(2)
979	Bensalem	....do	Hornblende schist	178	.18	2.9	13.9	16.4	27	30
1000	....do	....do	Mica schist	172	.13	4.1	9.8	17.5	13	(2)
1038	Rushland	....do	Siliceous limestone	168	.49	2.3	17.3	17.0	20	113
1943	Philadelphia	....do	Impure limestone	175	.32	4.2	9.6	16.0	10	80
7277	Rushland	....do	Siliceous limestone	172	.39	2.5	15.9	17.5	22	69
6616	(1)	....do	Slate	168	.34	2.9	13.9	18.3	47	38
1565	Bridge Valley	....do	Siliceous slate	168	.53	4.2	9.5	17.3	11	18
1245	(1)	....do	Argillaceous sandstone	165	1.01	2.8	14.1	17.5	26	48
1246	(1)	....do	Sandstone	153	3.04	2.7	15.0	16.6	20	63
4929	Newton	....do	....do	168	.51	3.6	11.0	18.4	27	17
2064	Edison post office	....do	Clay shale	168	.50	3.2	12.6	17.7	12	134
2323	Quakertown	....do	Gabbro	187	.43	1.7	24.1	18.6	15	23
2742	Rock Hill	....do	....do	190	.22	1.9	20.8	18.8	21	15
2727	West Windfield	Butler	Limestone	168	.23	3.7	10.8	16.1	6	50

[1] Exact locality not known.

[2] Test not made.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

PENNSYLVANIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
2894	East Taylor Township	Cambria	Calcareous sandstone	168	.38	2.8	14.2	17.5	11	60
5221	Johnstown	do	Limestone	168	.33	2.8	14.4	16.8	14	26
2267	East Mauch Chunk	Carbon	Feldspathic quartzite	168	.31	2.4	16.4	19.3	15	15
7424	(1)	do	do	165	.24	2.6	15.1	18.8	13	45
7371	(1)	do	Slag	143	4.90	12.2	3.3	15.3	7	25
8625	Hazard	do	Blast furnace slag	178	2.18	6.6	6.0	17.3	6	23
2622	Palmerton	do	Slag	168	3.47	12.2	3.3	15.0	8	17
6766	Bellefonte	Center	Calcareous sandstone	165	.75	4.5	8.9	15.3	7	36
1163	do	do	Limestone	168	.31	5.8	6.9	16.3	11	27
2251	do	do	do	168	.46	3.7	10.9	14.7	6	28
2431	Spring Township	do	do	168	.45	4.5	8.8	13.6	6	21
339	Cedar Hollow	Chester	Dolomite	178	.16	3.8	10.6	(2)	(3)	(4)
1076	East White Hall Township	do	do	178	.20	4.2	9.5	14.9	7	48
3355	Exton	do	do	178	.48	4.2	9.6	16.3	9	25
3757	Cedar Hollow	do	do	178	.17	4.5	9.0	16.3	8	17
964	Coatesville	do	Marble	178	.16	3.8	10.5	15.9	9	77
2712	Avondale	do	do	172	.30	4.5	9.0	14.7	5	27
3540	Howellsville	do	do	175	.10	4.2	9.4	13.0	8	69
5344	Coatesville	do	do	172	.24	5.9	6.8	11.8	5	15
6110	Cedar Hollow	do	Dolomitic marble	175	.38	4.7	8.4	16.0	10	21
7427	(1)	do	do	178	.22	2.9	14.0	14.8	8	23
965	Coatesville	do	Limestone	175	.22	4.7	8.5	15.4	9	21
1077	East White Hall Township	do	Dolomitic limestone	178	.31	3.9	10.3	15.7	7	18
2710	Avondale	do	Crytalline limestone	172	.41	13.2	3.0	14.0	3	32
3349	West Grove (near)	do	do	172	.31	4.2	9.6	13.8	6	53
3746	Knickerbocker	do	Limestone	172	.37	4.0	10.0	17.1	15	22
1172	St. Peters	do	Gabbro	190	.46	1.3	30.8	18.7	17	12
1308	Spring City	do	Feldspathic sandstone	156	1.74	3.8	10.6	18.1	15	207
1333	St. Peters	do	do	172	.27	5.6	7.2	18.0	27	69
1546	Coatesville	do	Hornblende gneiss	190	1.24	3.1	13.0	16.6	8	38
2713	Avondale	do	Biotite gneiss	162	.42	5.6	7.1	17.7	7	49
3345	Glenmoore	do	Hornblende gneiss	190	.20	3.4	11.7	18.3	15	26
6866	Dowingtown	do	Biotite gneiss	165	.31	4.1	9.9	18.2	6	42
6949	Marcus Hook	do	do	172	.16	4.2	9.6	18.1	8	16
9068	Dorland	do	Sericite gneiss	165	.17	3.5	11.4	18.7	13	9
1682	Glenmoore	do	Altered diabase	193	.32	2.2	18.0	19.0	36	(2)
1683	do	do	do	187	1.00	4.5	8.9	18.4	8	(3)
2043	do	do	Diabase	187	.83	2.3	17.5	19.0	32	16
1955	Atglen	do	Quartzite schist	165	.47	3.0	13.2	18.7	7	12

3133	Malvern	do	Sericite schist	175	1.02	18.2	2.2	[2]	[2]	33
3424	West Grove (near)	do	Mica schist	172	.35	3.8	10.6	16.8	10	39
6924	Cornog	do	Hornblende schist	190	.11	2.1	19.0	18.8	30	14
1957	Wawaset	do	Eclogite	196	.28	2.6	15.4	18.7	14	27
2044	Glenmoore	do	Altered diabase porphyry	187	.28	1.7	23.0	19.0	33	29
2045	do	do	do	187	.55	2.1	18.7	18.7	32	23
2695	Aldham	do	Altered granite	168	.17	1.8	21.7	18.5	26	26
2711	Avondale	do	Quartzite	165	.12	7.1	5.7	[2]	[2]	11
8244	Whitford	do	do	165	.26	3.0	13.3	[2]	[2]	3
8423	Valley Forge	do	Feldspathic quartzite	168	.34	3.5	11.5	19.3	8	12
6877	Cornog	do	Amphibolite	187	.17	3.2	12.6	15.6	8	13
6972	Dowingtown	do	Altered diorite	187	.93	2.8	14.1	17.8	9	11
1712	Leeper	Clarion	Limestone	168	.42	4.4	9.0	14.5	23	65
2687	[1]	do	do	168	.67	4.4	9.1	16.7	9	40
2792	Fryburg	do	do	168	.71	4.7	8.5	15.5	6	32
2093	Lock Haven	Clinton	do	168	.61	4.5	8.9	13.8	8	66
2094	do	do	do	168	1.38	6.5	6.1	8.4	4	119
2575	Salona	do	do	168	.42	5.6	7.1	15.0	5	48
3788	Lamar Township	do	do	168	.21	5.0	7.9	15.9	10	32
5578	Salona	do	Argillaceous limestone	168	.06	4.3	9.3	15.3	8	34
1313	Lime Ridge	Columbia	Limestone	168	.33	3.6	11.0	16.3	16	116
6413	Berwick	do	Calcareous slate	172	.57	10.0	4.0	7.3	10	20
7807	Espy	do	Argillaceous dolomite	175	.77	4.0	10.1	15.6	14	30
2599	Catawissa	do	Feldspathic sandstone	168	.56	2.7	14.8	18.9	12	37
1734	West Fairview	Cumberland	Calcareous sandstone	168	.31	3.6	11.1	15.7	17	65
2004	do	do	Feldspathic sandstone	168	.21	4.1	9.7	17.2	11	116
2349	do	do	do	168	.50	2.9	13.7	17.4	11	39
3380	Fairview	do	Calcareous sandstone	172	.22	4.2	9.5	17.0	14	29
2086	Bowmansdale	do	Limestone	168	.28	4.1	9.9	17.2	10	66
2065	Lemoyne	do	do	172	.42	3.4	11.9	17.4	9	46
2448	Mechanicsburg	do	do	172	.24	3.3	12.2	16.1	8	38
6281	Dickinson Township	do	do	172	.33	5.2	7.8	15.0	8	55
9354	Carlisle	do	Limestone	168	.57	7.1	5.6	15.7	10	16
7034	Mechanicsburg (near)	do	Siliceous marble	168	.14	5.5	7.3	15.2	2	19
2890	Silver Spring Township	do	Diabase	187	.56	1.6	25.6	18.7	28	18
1395	Steelton	Dauphin	Dolomite	147	.29	4.2	9.6	18.3	18	20
2173	Harrisburg	do	do	172	.47	4.2	9.4	18.0	13	43
2174	do	do	do	175	.24	2.9	13.6	17.9	12	68
8465	[1]	do	Siliceous dolomite	175	.28	3.6	11.1	16.3	8	48
1894	Paxtang	do	Limestone	172	.21	3.2	12.4	17.3	14	56
2383	Highspire	do	do	168	.59	3.9	10.3	13.3	6	33
8720	Hummelstown	do	Dolomitic limestone	178	.23	4.1	9.7	17.3	10	49
7295	do	do	do	175	.46	3.7	10.9	17.7	7	38
8306	[1]	do	Limestone	168	.57	5.5	7.3	14.2	2	55
8427	[1]	do	do	168	.27	5.4	7.4	15.0	4	12
2051	Londonderry Township	do	Diabase	190	.15	2.3	17.1	18.2	17	20
5813	Conewago (near)	do	do	190	.24	4.1	9.7	18.3	17	20
6453	Conewago	do	Gabbroitic diabase	193	.43	2.1	19.4	18.2	15	23
2784	Harrisburg	do	Calcareous sandstone	168	.26	3.5	11.3	15.2	13	62
2828	Susquehanna River (west of)	do	Feldspathic sandstone	165	.38	2.7	14.7	17.7	14	41

[1] Exact locality not known.

[2] Test not made.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

PENNSYLVANIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
5903	Rockville	Dauphin	Sandstone	153	8.68	5.6	7.1	18.7	7	13
5905	....do	....do	Feldspathic sandstone	165	.67	2.2	17.9	17.8	26	68
6104	Hummelstown	....do	Calcareous sandstone	168	.53	4.2	9.5	16.0	19	19
5902	Rockville	....do	Quartzite	168	.45	2.2	17.9	19.1	20	14
5904	....do	....do	....do	165	.37	2.4	16.7	19.3	23	22
7482	(1)	....do	Dolomitic marble	175	.45	3.0	13.2	17.3	9	68
254	Glen Mills	Delaware	Eclogite	(2)	(2)	2.8	14.5	(2)	(2)	(2)
998	....do	....do	....do	187	.10	1.8	12.7	(2)	(2)	23
4042	....do	....do	....do	193	.10	1.8	22.7	18.5	28	10
5827	Lenni	....do	Hornblende gneiss	181	.19	2.7	14.8	18.3	10	23
7682	....do	....do	Biotite gneiss	171	.20	2.8	14.3	18.6	13	14
8421	(1)	....do	....do	175	.42	2.5	16.1	18.7	12	28
1780	Glen Mills	....do	Schist	200	.26	2.7	14.7	18.7	24	214
7751	Lansdowne	....do	Hornblende schist	187	.54	3.8	10.5	16.7	7	43
5970	Glen Mills	....do	Pyroxene quartzite	198	.15	1.9	21.1	18.3	18	22
2800	....do	....do	....do	190	.24	2.0	20.4	18.5	22	12
2626	....do	....do	Diorite	193	.34	2.2	17.9	17.0	12	24
1354	Kersey	Elk	Limestone	172	.11	3.8	10.7	(2)	(2)	51
5870	St. Marys (near)	....do	Argillaceous limestone	168	.49	5.0	8.0	16.0	5	41
5881	Daguscahonda	....do	Feldspathic sandstone	156	2.95	5.0	8.0	16.7	7	38
1925	Dunbar	Fayette	Limestone	168	.26	2.3	17.1	18.3	14	60
1941	Union Town	....do	....do	168	.70	4.4	9.2	13.0	5	102
1956	Farmington post office	....do	....do	168	.52	4.0	10.0	15.7	8	109
1967	Humberstown post office	....do	....do	168	.41	2.6	15.4	16.0	9	220
2028	Dunbar	....do	....do	168	.34	2.3	17.7	17.0	9	108
2040	Somerfield (near)	....do	....do	168	.80	5.5	17.2	14.3	(2)	90
2041	....do	....do	....do	168	.65	3.1	13.1	15.9	10	67
2079	Masontown	....do	....do	168	2.42	3.9	10.4	16.5	9	76
2226	Somerfield (3 miles from)	....do	....do	168	.46	2.6	15.4	16.2	9	105
2228	Uniontown (7 miles from)	....do	....do	168	.72	5.2	7.6	13.5	5	53
2612	Connellsville (3 miles from)	....do	....do	168	.24	2.4	16.7	17.6	13	65
3130	Fayette City	....do	....do	168	.20	5.5	7.3	16.3	4	90
3161	Brownsville (near)	....do	....do	168	.51	3.5	11.3	17.6	12	23
3789	Uniontown	....do	Siliceous limestone	168	.15	2.9	13.7	17.3	11	57
3806	....do	....do	....do	168	.32	3.4	11.9	17.8	11	37
3852	Evans	....do	Limestone	168	2.16	3.1	13.0	15.5	17	29
3853	Dunbar	....do	....do	168	.34	3.6	11.2	16.6	7	43
5290	Dunbar Township	....do	Siliceous limestone	168	.27	2.4	16.4	17.1	15	31
5692	Uniontown	....do	Limestone	168	.23	3.5	11.6	15.7	7	14

6097	Bidwell	do	do	168	.90	3.0	13.3	15.7	12	74
6629	Connellsville	do	Siliceous limestone	168	.06	2.5	15.9	16.3	18	124
9347	do	do	Limestone	168	.47	3.2	12.5	17.3	12	15
9402	Uniontown (near)	do	Siliceous limestone	168	.37	3.5	11.4	17.2	15	119
9374	do	do	do	165	.19	3.0	13.3	18.2	11	34
2080	Masontown	do	Sandstone	156	3.14	10.1	3.9	[2]	3	500+
4025	Bluestone	do	Calcareous sandstone	168	.20	2.6	15.6	18.0	11	46
5771	Indian Creek station	do	do	168	.28	3.3	12.0	17.0	17	66
2089	Waynesboro (near)	Franklin	Siliceous limestone	175	.77	3.6	11.1	17.5	9	48
2677	Richmond Furnace	do	Limestone	175	.21	2.4	16.4	17.3	18	76
3142	Mercersburg	do	do	168	.33	4.3	9.3	15.8	9	14
2600	Guilford	do	Quartzite	162	.40	4.3	9.4	19.2	9	7
3141	Montgomery Township	do	Dolomite	178	.52	3.2	12.6	17.9	10	24
2113	Brady	Huntingdon	Limestone	168	.41	5.0	8.0	15.5	5	87
2119	Brady Township	do	do	168	.52	4.1	9.8	15.3	5	69
2126	Huntingdon	do	do	175	.22	3.1	13.0	16.7	14	50
2211	Brady Township	do	do	168	.21	6.6	6.1	11.0	4	96
2212	do	do	do	172	.24	4.0	10.0	15.0	9	83
2215	do	do	do	168	.37	5.4	7.4	16.0	7	92
2243	Warriors Mark	do	Siliceous limestone	175	.52	2.5	15.7	18.2	14	22
2275	Mount Uniontown	do	Limestone	168	.62	4.2	9.5	14.4	6	51
2337	Shirley Township	do	do	168	.36	4.1	9.8	15.2	6	81
2341	[1]	do	do	168	.57	3.7	10.8	15.8	6	49
2342	[1]	do	do	168	.24	4.5	9.0	17.3	6	97
2345	Mill Creek	do	do	168	.94	4.8	8.3	15.2	5	31
2491	Union Furnace	do	do	168	.23	3.8	10.6	16.2	7	50
5337	Huntingdon	do	do	168	.42	4.8	8.3	15.6	7	28
7432	do	do	Argillaceous limestone	172	.52	[2]	[2]	16.0	4	39
2120	Brady Township	do	Sandstone	[2]	[2]	6.5	6.2	18.5	5	23
2121	do	do	do	[2]	[2]	[2]	[2]	16.7	7	112
2692	Huntingdon	do	Feldspathic sandstone	168	.42	2.2	18.3	17.5	24	24
5604	Water Street	do	do	168	.70	2.3	17.2	18.7	20	50
5726–1	Huntingdon	do	do	165	.49	2.5	16.3	18.1	21	42
5726–2	do	do	do	165	.69	3.3	12.1	18.6	14	57
2127	do	do	Siliceous dolomite	168	.53	4.5	9.0	[2]	[2]	93
2442	Union Furnace (near)	do	Dolomite	178	.16	3.5	11.3	16.1	11	29
2834	[1]	Indiana	Limestone	168	.06	2.7	14.7	16.8	13	75
2835	[1]	do	Sandstone	150	3.26	18.8	2.1	5.7	5	47
5495	Mifflin	Juniata	Argillaceous dolomite	172	.31	4.4	9.1	16.3	9	25
1888	Scranton	Lackawanna	Sandstone	165	.34	2.0	20.0	17.7	15	420
2047	Dunmore	do	do	162	.88	2.5	16.1	18.3	9	22
2317	Glenburne	do	Ferruginous sandstone	168	1.22	4.0	9.9	15.4	15	34
1222	West Donegal	Lancaster	Gabbro	190	.34	2.4	16.8	18.3	18	7
1534	Eden Township	do	Diabase	187	.24	1.7	23.8	18.5	39	61
1688	Bart Township	do	do	187	.22	1.8	22.7	19.1	39	63
1847	Lancaster	do	Olivine diabase	190	.35	3.7	10.9	17.6	13	51
2026	Cornwall (near)	do	Diabase	193	.28	1.9	20.8	18.3	30	25
2945	Lancaster	do	do	187	.30	1.8	22.5	18.7	29	14
5326	Elizabethtown	do	do	193	.32	1.8	21.7	17.9	18	14
1569	Strasburg Township	do	Dolomite	178	.45	5.0	8.0	14.3	4	20

[1] Exact locality not known.

[2] Test not made.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

PENNSYLVANIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
1590	Refton post office	Lancaster	Dolomite	178	.24	3.9	10.2	11.8	9	23
1614	do	do	do	178	1.14	4.7	8.4	12.7	6	45
6700	Rockville	do	Argillaceous dolomite	178	.35	4.5	8.8	16.0	4	83
6283	Maytown	do	Limestone	165	.33	6.0	6.7	15.8	5	46
6567	Salisbury	do	Siliceous limestone	168	.37	3.7	10.7	14.3	9	67
7044	Millway	do	Limestone	172	.18	3.9	10.4	16.5	8	12
7047	Rothville	do	do	178	.16	4.3	9.4	16.9	10	11
7048	Lititz	do	do	168	.17	5.0	8.0	12.7	4	21
7809	Rheems (West Donegal Township)	do	do	174	.52	4.9	8.2	16.7	16	25
5548	Quarryville	do	Marble	168	.20	5.2	7.8	14.5	5	24
6113	Gap	do	Dolomitic marble	181	.22	7.6	5.3	12.7	4	18
6663	do	do	do	181	.23	4.7	8.6	11.8	4	36
6670	do	do	do	178	.30	4.8	8.3	13.6	6	41
7091	Lititz	do	Marble	172	.08	4.2	9.5	11.5	5	69
6568	Salisbury	do	Calcareous schist	181	.28	15.2	2.6	(1)	(1)	40
8139	Lancaster	do	do	172	.40	4.0	9.9	15.5	5	78
2460	Ellwood City (near)	Lawrence	Limestone	168	.64	4.5	8.9	(1)	(1)	42
2686	Chewton	do	do	168	.39	4.4	9.1	15.8	8	19
2717	Wayne Township	do	do	168	.45	3.9	10.2	16.5	9	88
4322	Rock Point (near)	do	do	168	.48	5.1	7.9	15.6	7	38
5557	Walford	do	do	168	.25	4.9	8.2	16.5	7	26
2374	Sheridan	Lebanon	do	172	.12	3.6	11.2	16.5	6	39
6632	Cornwall	do	Dolomitic limestone	178	.50	4.1	9.7	13.5	8	133
6593	South Lebanon Township	do	Limestone	168	.31	4.1	9.8	13.3	6	131
6682	Lebanon	do	Argillaceous limestone	168	.34	4.3	9.3	12.9	9	48
6887	do	do	Siliceous limestone	172	.20	3.8	10.5	16.1	9	50
7540	do	do	do	169	.20	4.3	9.3	15.8	3	44
7653	do	do	Argillaceous limestone	172	.17	3.2	12.5	14.7	7	42
6532	Annville	do	Carbonaceous dolomite	175	.83	2.9	13.6	17.0	7	65
6612	Lebanon	do	Dolomite	175	.48	3.7	10.9	17.6	20	76
1207	Vera Cruz	Lehigh	Gneiss	172	.46	(1)	(1)	18.6	14	16
1692	Allentown	do	Dolomite	175	.07	6.9	5.8	18.6	20	16
6327	Catasaqua	do	Argillaceous dolomite	175	.17	2.4	16.7	(1)	(1)	26
2662	Vera Cruz	do	Syenite	172	.36	2.3	17.7	18.3	16	19
697	Wilkes-Barre	Luzerne	Sandstone	168	.46	3.4	11.6	(1)	(1)	202
1074	do	do	Feldspathic sandstone	168	.32	2.8	14.2	18.6	37	34
1114	Conyngham	do	do	168	.37	1.8	22.9	17.0	23	55
1396	Hazelton	do	Sandstone	165	1.60	3.3	12.1	15.6	10	283
1698	do	do	do	168	1.12	3.7	10.9	15.7	13	41

1874	White Haven	do	do	165	.32	1.0	40.8	18.5	23	28
2993	Wilkes-Barre	do	Feldspathic sandstone	168	.44	2.3	17.7	18.8	32	82
2577	Lehigh Tannery	do	do	168	.11	2.0	20.4	18.3	22	37
6305	Duryea Borough	do	Calcareous sandstone	168	.46	2.4	16.4	15.5	10	123
6308	Pittston (near)	do	do	165	.55	3.0	13.3	16.3	12	100
7680	Wapwallopen	do	Feldspathic sandstone	168	.31	1.7	23.0	18.3	33	25
7681	Pittston	do	Calcareous sandstone	168	.35	2.9	13.8	18.6	7	60
8406	(2)	do	Feldspathic sandstone	165	.42	2.2	18.4	19.2	11	17
1075	Wilkes-Barre	do	Slate	172	.49	(1)	(1)	18.0	22	25
1252	(2)	do	Feldspathic quartzite	168	.18	1.8	22.6	18.0	26	13
1278	White Haven	do	do	168	.15	2.1	18.8	18.6	20	16
7679	do	do	do	165	.40	1.9	21.0	18.7	22	13
914	Williamsport	Lycoming	Sandstone	162	2.00	2.9	13.6	16.4	33	81
1653	Coganhouse Township	do	Calcareous sandstone	165	1.09	4.8	8.4	13.0	7	50
3783	Piatt Township	do	Sandstone	162	.75	3.3	12.3	17.7	13	20
4035	Williamsport	do	Feldspathic sandstone	162	2.12	(1)	(1)	13.7	9	126
4036	do	do	do	162	2.46	(1)	(1)	12.3	8	95
4037	do	do	do	162	2.13	(1)	(1)	12.3	8	81
4735	Larryville	do	do	162	1.10	4.6	8.7	18.2	22	10
5721	Hughesville	do	Argillaceous sandstone	168	.80	3.3	12.1	12.3	13	77
7445	Picture Rocks	do	Feldspathic sandstone	162	1.72	2.6	15.5	19.2	19	43
1103	Williamsport	do	Shale	172	.87	(1)	(1)	13.9	3	116
1139	do	do	Limestone	168	.36	7.4	5.4	14.6	13	21
1161	do	do	do	168	.24	5.8	6.8	16.4	8	60
1164	Porter Township	do	do	168	.58	4.6	8.8	16.2	8	65
1279	Montgomery (near)	do	do	172	.78	4.9	8.2	8.7	9	23
1872	Jersey Shore	do	do	172	.38	4.1	9.8	17.3	10	95
2751	do	do	do	168	(1)	5.1	7.8	14.3	8	87
3868	Williamsport	do	Argillaceous limestone	168	.40	4.8	8.3	17.3	8	16
6153	Porter Township	do	do	165	.58	3.8	10.6	18.0	22	33
6154	do	do	do	168	.56	4.2	9.4	17.3	21	24
6155	do	do	do	172	1.26	5.4	7.4	12.5	14	42
6156	do	do	Limestone	168	.44	4.6	8.6	16.0	11	42
6157	do	do	do	178	.43	3.0	13.5	16.5	8	24
6158	do	do	do	168	.65	3.2	12.8	14.7	7	32
6691	Lower Fairfield	do	do	168	.18	4.7	8.5	16.2	8	95
6880	Muncy Township	do	Siliceous limestone	172	.22	7.4	5.4	13.0	6	65
7322	do	do	Limestone	168	.47	6.0	6.7	15.7	4	82
7453	Loyalsock Township	do	Carbonaceous limestone	168	1.47	4.1	9.8	16.8	8	139
1121	Newberry	do	Diabase	190	.25	(1)	(1)	18.6	31	79
1122	do	do	do	190	.19	(1)	(1)	18.7	54	40
7477	Montourville	do	Calcareous chert	165	.96	4.9	8.2	19.7	3	13
1745	Linden	do	Dolomite	175	.51	5.4	7.4	15.3	10	48
6813	Sharpsville	Mercer	Blast-furnace slag	156	4.32	19.1	2.1	14.5	3	257
2224	Naginey	Mifflin	Limestone	168	.38	4.9	8.1	15.0	10	40
2531	Reedville	do	do	165	.83	5.5	7.2	11.9	4	55
4396	Milroy	do	Siliceous limestone	172	.42	3.0	13.3	17.0	17	31
3224	Lewistown	do	Limestone	168	.29	4.1	9.7	18.3	18	25
8653	do	do	Argillaceous limestone	168	.35	2.3	17.4	16.8	7	56
5438	(2)	do	Sandstone	165	.32	4.1	9.8	17.4	8	3

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

PENNSYLVANIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
1359	Tobyhanna	Monroe	Feldspathic sandstone	168	.25	3.7	10.8	18.4	19	30
1816	Smithfield	do	Calcareous slate	168	.33	3.9	10.3	15.0	14	60
365	Hatboro	Montgomery	Ferruginous sandstone	165	.83	4.0	10.0	(1)	(1)	(1)
2322	Bridgeport	do	Feldspathic sandstone	159	1.32	3.1	12.7	19.4	14	253
2684	Green Lane	do	Calcareous sandstone	168	1.85	2.0	20.4	18.7	23	22
5132	Salford	do	Argillaceous sandstone	172	1.22	2.2	17.9	15.8	6	23
6885	Phoenixville (near)	do	Feldspathic sandstone	181	.34	2.0	19.6	18.8	44	52
7420	Linfield	do	Ferruginous sandstone	156	2.53	3.0	13.3	18.5	9	131
1037	Green Lane	do	Slate	172	.68	2.6	15.2	17.9	17	179
1895	Fraconia Township	do	do	168	.24	2.5	15.9	16.5	6	241
2039	Hendricks Station	do	Calcareous slate	165	1.24	2.2	17.9	16.4	8	83
2049	Green Lane	do	Indurated slate	168	.75	1.7	23.5	18.9	40	23
2172	do	do	Slate	175	.59	2.6	15.5	15.4	10	59
2624	Ambler	do	do	175	.73	4.5	8.8	16.2	6	96
2683	Green Lane	do	do	172	.21	2.1	19.0	18.6	38	20
5080	Sunneytown	do	do	172	.24	2.6	15.4	18.7	24	20
5197	Green Lane	do	Siliceous slate	172	.57	2.9	13.6	18.9	52	34
6459	Pottstown	do	do	172	.76	2.1	19.4	18.5	13	85
6460	do	do	do	172	.75	2.1	18.9	18.3	13	61
6639	Lower Gwynedd	do	Slate	168	1.24	2.7	15.0	13.5	17	65
7669	Upper Salford Township	do	Siliceous slate	171	1.37	4.4	9.0	18.2	11	31
8728	Green Lane	do	Micaceous slate	172	.42	2.0	19.5	17.5	17	29
6638	White Marsh Township	do	Feldspathic quartzite	162	.74	3.3	12.0	18.9	19	2
1316	Port Kennedy	do	Diabase	181	.26	2.8	14.5	(1)	(1)	186
2558	Green Lane	do	do	193	.31	2.7	14.9	17.1	8	17
2682	do	do	Altered diabase	181	.28	1.6	25.0	18.5	40	48
2760	do	do	Diabase	187	.42	1.4	28.6	18.5	33	45
1315	Port Kennedy	do	Dolomite	178	.22	4.2	9.5	14.7	11	13
2021	Ivory Rock (Plymouth Township)	do	do	175	.82	4.1	9.9	14.7	8	57
2092	Green Lane	do	Gabbro	193	.34	2.5	15.8	17.5	12	15
2261	Paper Mills Station	do	Pyroxene granolite	190	.16	2.7	14.6	19.2	14	32
8050	Bryn Athyn	do	Aplitic granite	165	.22	4.6	8.7	19.0	6	17
8689	Pencoyd	do	Granite	175	.32	(1)	(1)	18.3	12	13
2274	Conshohocken (near)	do	Limestone	178	.53	4.2	9.6	16.0	8	21
3406	Pottstown	do	Siliceous limestone	168	.80	3.0	13.4	17.2	14	30
8114	Norristown	do	do	175	.50	3.4	11.6	17.4	10	46
4601	Bethayres	do	Gneiss	165	.32	4.8	8.3	18.7	17	59
7853	Huntingdon Valley	do	Granite gneiss	168	.16	5.1	7.8	18.8	20	9

8418	do	do	do	165	.34	3.4	11.7	19.3	15	19
8785	Pencoyd	do	do	165	.32	2.6	15.6	18.2	8	17
6624	Port Kennedy	do	Dolomitic marble	168	.12	6.3	6.3	14.8	5	25
6719	Norristown (near)	do	do	178	.26	4.5	9.0	14.5	5	44
7463	Norristown	do	do	178	.32	4.1	9.9	15.9	6	32
8008	(2)	do	do	178	.21	7.3	5.5	14.3	3	33
8087	Plymouth Meeting	do	do	178	.54	4.0	10.0	12.7	6	33
8212	Plymouth Township	do	do	178	.22	3.6	11.1	15.8	8	34
8213	do	do	do	178	.29	3.4	11.8	17.0	9	60
7667	Conshohocken	do	Schistose quartzite	162	.59	4.0	10.1	19.3	14	2
8211	Pottstown	do	Siliceous slate	168	.36	2.0	20.0	19.1	(1)	29
6665	Fort Washington	do	Quartzite schist	165	.19	4.5	9.0	18.1	11	56
6862	(2)	do	Eclogite	184	.19	2.8	14.5	18.8	20	19
6926	West Moreland Township	do	do	184	.19	2.6	15.4	18.4	19	10
9448	Bryn Athyn	do	do	184	.13	3.3	12.1	19.3	15	16
1879	Danville	Montour	Chert	125	4.28	6.0	6.7	15.0	7	46
352	Along Delaware River	Northampton	Diorite	181	.30	2.8	14.3	(1)	(1)	(1)
1508	Easton	do	Altered diorite	187	.30	1.9	21.3	17.8	21	15
730	Redington	do	Dolomite	181	.08	5.5	7.3	(1)	(1)	(1)
1223	Nazareth	do	do	175	.22	2.4	16.9	17.4	27	26
2014	Easton	do	do	175	.26	3.6	11.2	17.9	17	27
2186	Bath	do	Siliceous dolomite	175	.10	2.1	19.2	17.7	13	51
3322	Siegfried	do	Dolomite	175	.30	2.5	15.7	17.3	19	11
3323	do	do	do	175	.23	2.8	14.5	17.4	12	38
1032	Easton	do	Limestone	178	.21	3.5	11.3	15.4	10	79
2240	Nazareth	do	Argillaceous limestone	165	1.44	4.2	9.5	10.9	6	29
4599	Lehigh Gap	do	Slate	172	.25	7.8	5.1	10.8	9	28
8333	Easton	do	Blast-furnace slag	178	.87	3.7	10.8	17.6	11	20
8494	do	do	do	181	.93	3.1	12.9	17.5	10	26
1105	De Wart	Northumberland	Limestone	165	.40	3.8	10.6	15.6	9	93
1162	Turbotsville	do	do	168	.49	6.1	6.5	17.0	10	500+
1165	De Wart	do	do	168	.36	4.6	8.7	15.5	8	79
1998	Watsontown	do	do	172	.32	3.3	12.2	13.2	7	50
8081	(2)	do	do	168	.82	6.0	6.7	14.7	5	28
2357	McEwensville	do	Siliceous limestone	159	2.01	10.0	4.0	16.6	9	24
2507	Sunbury (near)	do	Limestone	168	.63	5.6	7.2	15.8	7	30
1994	Dalmatia Post Office	do	Sandstone	165	.49	1.7	23.3	19.0	25	50
6092	Shamokin	do	Feldspathic sandstone	165	.31	3.0	13.5	18.7	16	59
6079	Dalmatia	do	do	165	.24	2.1	19.0	19.0	33	45
1003	Fort Hunter	Perry	Indurated sandstone	165	.50	2.5	15.9	17.9	21	174
2013	Marysville	do	Sandstone	165	.49	1.8	22.2	18.0	15	97
2225	do	do	Feldspathic sandstone	165	.78	1.3	30.8	18.2	11	76
2339	do	do	do	162	.98	2.0	20.2	19.0	16	80
3016	do	do	do	165	.34	1.7	23.5	18.4	26	60
3379	do	do	do	162	.93	2.1	18.7	18.3	24	32
3425	do	do	do	165	.53	2.5	16.1	18.9	28	48
3426	do	do	do	165	.94	2.6	15.5	17.6	13	67
4623	Philadelphia	Philadelphia	Dolomite	178	.40	6.4	6.3	(1)	(1)	20
4624	do	do	do	168	.24	5.1	7.9	(1)	(1)	42
4626	do	do	Marble	172	.59	5.0	8.0	13.5	8	11

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

PENNSYLVANIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
5633	Philadelphia	Philadelphia	Argillaceous sandstone	(1)	(1)	(1)	(1)	15.8	15	(1)
6896	Frankford	do	Hornblende gneiss	181	.21	3.8	10.5	16.8	6	15
2932	Greentown	Pike	Feldspathic sandstone	168	.91	5.2	7.8	7.5	9	36
2933	do	do	do	165	.74	3.2	12.7	17.7	8	28
4392	Portage Township	Potter	Sandstone	159	3.16	6.5	6.2	11.7	6	78
2210	Sittler	Schuylkill	Calcareous shale	168	.61	5.4	7.4	15.0	8	201
2299	Ringtown	do	Feldspathic sandstone	168	.75	2.3	17.7	17.7	15	57
6630	Ancheys Station	do	do	168	.42	2.4	16.5	17.8	32	64
6657	Summit Station	do	do	168	.50	2.4	16.7	17.5	9	97
6721	Roeders Station	do	Sandstone	162	.80	6.7	6.0	17.9	6	26
7179	do	do	do	162	.75	6.4	6.2	18.0	6	(1)
7310	(2)	do	Feldspathic sandstone	168	.77	2.7	14.9	15.0	11	96
4814	Port Clinton	do	Quartzite	162	.41	2.2	18.6	19.3	20	14
6556	Roeders Station	do	Slate	172	.41	4.0	10.0	12.3	28	69
2009	Somerfield	Somerset	Limestone	168	.64	3.4	11.8	15.7	14	105
2036	do	do	do	168	.53	4.3	9.3	14.0	6	65
2052	Paint Township	do	Impure limestone	178	.27	3.5	11.5	16.9	15	193
8925	Boswell	do	Limestone	168	1.05	4.4	9.1	17.3	10	12
8926	do	do	Argillaceous limestone	172	.39	4.9	8.1	17.0	14	15
3243	McSpadden	do	Siliceous sandstone	168	.58	2.5	16.0	18.2	11	16
5246	Colley Township	Sullivan	Conglomeratic sandstone	165	1.36	7.0	5.7	15.7	8	28
3929	Brooklyn	Susquehanna	Sandstone	165	1.42	5.0	8.1	13.0	11	25
3930	do	do	do	165	1.47	5.1	7.8	12.3	10	28
4065	do	do	do	165	1.81	4.6	8.7	11.7	8	53
6659	Susquehanna	do	Limestone	168	.30	3.8	10.5	13.9	6	127
1516	Mansfield	Tioga	Siliceous limestone	168	.36	5.0	8.0	12.5	5	54
2425	Wellsboro	do	Limestone	165	1.15	4.7	8.5	16.7	12	35
1883	do	do	Sandstone	165	1.64	3.0	13.2	12.0	13	108
2827	Duncan Township	do	Calcareous sandstone	172	.40	4.2	9.6	16.3	13	34
3061	Delmar	do	do	168	.78	3.3	12.1	16.3	7	39
3732	Wellsboro	do	Argillaceous sandstone	168	.47	5.4	7.4	17.5	25	28
3784	Richmond Township	do	Sandstone	165	.38	3.5	11.4	19.0	21	10
3934	Charleston Township	do	Calcareous sandstone	168	.86	3.6	11.0	16.3	26	18
3945	do	do	Sandstone	159	2.81	4.3	9.2	6.0	10	51
4077	do	do	Calcareous sandstone	168	.43	2.5	15.9	16.5	19	64
1644	Lewisburg	Union	Limestone	168	1.23	4.5	9.0	14.7	5	89
2134	do	do	do	168	.81	3.9	10.4	15.7	4	78
2788	do	do	do	168	.73	4.9	8.2	14.8	5	23

5882	Mifflinburg	do	Argillaceous limestone	168	.19	5.5	7.2	14.8	8	27
5883	do	do	Limestone	168	.39	5.3	7.5	15.6	6	21
2536	Windfield	do	Slag	184	.47	3.4	11.6	17.7	12	20
6761	Allenwood	do	Clay shale	168	1.73	11.8	3.4	0	3	54
3262	Franklin (near)	Venango	Argillaceous sandstone	150	4.69	4.5	8.8	.3	7	33
1185	Warren	Warren	Feldspathic sandstone	159	2.73	[1]	[1]	[1]	8	58
2604	do	do	do	159	2.60	3.6	11.2	5.8	9	48
2613	Washington	Washington	Argillaceous limestone	168	.73	2.8	14.1	16.5	12	35
2614	do	do	Dolomitic limestone	175	.95	2.6	15.2	16.8	14	29
3707	Monongahela	do	Limestone	172	.24	4.0	10.0	15.8	12	45
3708	do	do	do	162	3.19	3.3	12.0	16.3	16	54
2327	Buckenham	Wayne	Feldspathic sandstone	165	1.50	3.3	12.0	14.0	8	38
2370	do	do	Ferruginous sandstone	168	1.30	3.8	10.4	12.5	10	55
2911	Steene Station (near)	do	Feldspathic sandstone	168	.56	2.7	14.6	17.4	9	29
5566A	Buckenham	do	Conglomeratic sandstone	156	3.22	11.0	3.6	0	4	49
5566B	do	do	do	175	1.21	6.7	5.9	15.3	7	23
5830	Prompton	do	Feldspathic sandstone	168	.32	3.4	11.9	17.8	12	45
2481	Greensburg	Westmoreland	Limestone	168	1.01	3.7	10.8	16.9	10	43
2533	North Huntingdon	do	do	165	1.01	4.9	8.2	16.7	8	50
2750	McKeesport (near)	do	do	172	.96	3.2	12.3	17.0	13	44
2879	Mount Pleasant	do	do	168	.57	4.2	9.5	16.9	8	30
4877	Sewickley Township	do	Siliceous limestone	168	1.24	3.8	10.5	14.1	12	16
4878	do	do	Limestone	172	.36	4.5	8.9	14.3	11	11
5605	Blairsville-Intersection	do	Siliceous limestone	168	.41	2.1	19.2	17.2	19	19
7900	[2]	do	do	168	.33	2.3	17.5	16.7	8	64
8911	Ligonier	do	do	168	.16	2.6	15.3	17.3	8	53
1123	West Donegal	do	Diabase	187	.26	[1]	[1]	18.2	39	43
1258	Saltsburg	do	Calcareous sandstone	165	1.64	3.6	11.0	9.9	11	33
2055	Loyalhanna Township	do	Feldspathic sandstone	159	2.91	2.7	14.8	13.3	9	124
1873	Nicholson	Wyoming	do	168	1.49	3.8	10.6	16.0	10	28
3191	Scranton	Lackawanna	Sandstone	162	.66	3.7	10.9	19.0	9	1
5388	Black Walnut	Wyoming	do	165	1.33	4.8	8.4	14.6	12	23
1239	Marsh Run Township	York	Gabbro	184	.34	2.2	18.5	17.5	14	21
2100	[2]	do	do	187	.91	3.2	12.4	17.7	12	16
3410	York Haven	do	do	190	.34	2.6	15.6	18.3	15	12
1366	York	do	Diabase	190	.10	2.0	19.8	[1]	[1]	15
1694	Carroll Township	do	do	187	.35	1.8	21.7	18.3	22	64
1696	Warrington Township	do	do	193	.07	2.5	15.9	18.5	16	40
2937	Dillsburg (near)	do	do	187	.41	2.2	17.9	19.1	26	34
7458	York	do	do	187	.39	3.9	10.3	18.8	25	22
1691	do	do	Micaceous sandstone	172	.33	3.6	11.2	13.9	8	14
1695	Warrington Township	do	Indurated sandstone	175	.53	2.4	16.4	18.7	15	9
1948	Hanover	do	Sandstone	143	4.62	12.8	3.1	[1]	[1]	13
2936	Dillsburg (near)	do	Feldspathic sandstone	150	4.32	6.5	6.2	16.6	10	86
2938	do	do	Ferruginous sandstone	147	4.46	13.4	3.0	11.0	8	500+
1866	Hanover	do	Quartzite	165	.20	2.5	15.9	19.3	[1]	6
7330	York	do	do	159	.94	3.6	11.1	18.7	7	19
9666	do	do	do	162	.68	4.1	9.8	19.3	9	11
2135	Wellsville Borough	do	Epidosite	178	.67	2.8	14.3	18.9	22	49
2562	Washington Township	do	Hematite	256	4.36	18.3	2.2	17.6	11	26
2762	Spring Forge	do	Limestone	178	.37	3.2	12.5	[1]	[1]	21

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

PENNSYLVANIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
2948	York	York	Limestone	172	.32	4.5	8.9	14.0	5	53
4706	York (near)	do	do	168	.19	5.8	6.8	8.8	6	24
5780	do	do	do	168	.48	4.3	9.3	14.3	3	36
5781	West York	do	Argillaceous limestone	175	.29	2.8	14.2	17.3	28	35
5782	Hellam	do	Crystalline limestone	172	.18	3.1	13.1	16.7	7	41
5783	York	do	do	172	.19	3.1	12.9	14.8	9	18
5784	do	do	do	168	.44	4.8	8.3	14.8	7	36
7049	do	do	Limestone	178	.22	3.9	10.3	17.1	6	26
7050	do	do	do	172	.15	5.7	7.0	9.0	4	20
7616	do	do	Crystalline limestone	175	.30	6.1	6.5	15.6	5	60
4097	Glen Rock	do	Chlorite epidote schist	181	.37	6.8	5.9	12.3	6	31
4106	Farm Grove	do	Hornblende chlorite schist	193	.43	2.8	14.3	18.4	16	23
5778	Emigsville	do	Dolomitic marble	175	.15	4.6	8.6	14.3	7	39
5779	Wrightsville	do	do	175	.14	2.6	15.3	17.1	13	39
7428	York	do	do	178	.19	3.4	11.8	15.3	9	20
7457	Hanover	do	Siliceous marble	168	.49	4.3	9.3	15.8	7	70
9067	York	do	Dolomitic marble	178	.16	8.2	4.9	14.2	5	44
7790	Hanover	do	Siliceous dolomite	178	.16	4.0	10.0	17.7	12	28
4708	Blue Mountain	(1)	Serpentine	165	.19	4.7	8.5	15.0	11	83
7431	(1)	(1)	Carbonaceous limestone	168	.31	5.0	7.9	16.3	5	54
			RHODE ISLAND.							
886	Bristol	Bristol	Chloritic quartzite	172	0.45	4.7	8.5	18.9	10	22
889	do	do	Gneissoid granite	168	.28	2.8	14.3	18.0	10	53
890	Warren	do	Chloritic sandstone	168	.38	2.7	15.0	15.3	24	12
891	East Greenwich	Kent	Biotite gneiss	168	.15	2.6	15.1	18.8	20	59
1818	Warwick	do	Mica schist	165	.74	3.8	10.6	17.5	6	9
1821	do	do	Mica quartzite	172	.59	3.9	10.4	18.7	4	27
302	Middletown	Newport	Quartzite	(2)	(2)	3.1	12.8	(2)	(2)	(2)
896	do	do	do	175	.27	2.8	14.4	19.2	(2)	12
1019	Newport	do	Granite	162	.59	3.0	13.5	18.7	15	53
1020	Portsmouth	do	Arkosic gneiss	181	.25	4.2	9.6	15.4	10	33
1817	Jamestown	do	Metamorphic sandstone	168	.59	4.8	8.3	18.3	16	17
1822	Portsmouth	do	Feldspathic sandstone	168	.59	2.4	16.8	16.7	15	15
14	Cumberland	Providence	Peridotite	225	(2)	4.2	9.4	(2)	(2)	(2)

1022	do	do	Altered peridotite	221	.27	4.3	9.3	15.0	12	30
42	do	do	Quartzite	(2)	(2)	4.4	9.1	(2)	(2)	(2)
888	North Providence	do	Mica quartzite	172	.40	2.6	15.5	16.5	21	25
894	Cranston	do	Feldspathic quartzite	172	.06	3.2	12.5	17.6	12	33
1018	Cumberland	do	Quartzite breccia	162	.69	2.9	14.0	(2)	(2)	13
5589	do	do	Quartzite	162	.47	4.4	9.0	19.3	16	5
659	Providence	do	Augite diorite	187	.18	1.9	20.6	(2)	(2)	23
887	Cranston	do	Granite	175	.19	3.4	11.9	19.1	10	39
893	Johnston	do	Gneissoid granite	165	.25	2.2	18.2	18.5	12	12
895	Smithfield	do	Granite	162	.19	3.7	10.8	(2)	10	18
1017	Cumberland	do	Hornblende granite	175	.26	1.6	25.6	17.9	12	29
9242	Smithfield	do	Gneissoid granite	165	.45	3.0	13.3	18.3	6	7
892	East Providence	do	Indurated sandstone	168	.31	3.0	13.4	19.1	7	111
897	Johnston	do	Amphibolite	193	.17	2.8	14.2	19.0	9	11
6827	do	do	do	187	.38	1.8	21.7	18.6	26	13
1819	do	do	Hornblende schist	184	.75	3.0	13.2	18.3	10	32
1820	East Providence	do	Chlorite gneiss	175	.46	4.6	8.6	15.7	8	17
5023	Cranston	do	Sericite gneiss	165	.31	4.6	8.6	17.8	9	26
1021	Westerly	Washington	Granite	165	.65	2.4	16.6	17.7	12	25
1213	South Kingston	do	do	162	.43	5.2	7.7	15.8	4	11
1259	Westerly	do	do	165	.31	2.8	14.1	18.1	11	15
1260	do	do	do	165	.52	2.2	18.5	18.2	9	22
8867	do	do	do	165	(2)	4.0	10.0	(2)	6	(2)
8868	do	do	do	165	(2)	2.9	13.8	(2)	12	(2)
8869	do	do	do	165	(2)	3.5	11.6	(2)	11	(2)

SOUTH CAROLINA.

783	Abbeville	Abbeville	Chert	162	1.19	22.1	1.8	(2)	(2)	11
3451	do	do	do	165	.35	9.1	4.4	(2)	(2)	6
6490	do	do	Muscovite granite	165	.57	4.5	8.8	17.2	9	14
6491	do	do	Altered muscovite granite	159	.22	18.2	2.2	0.0	3	24
6493	do	do	Gneissoid granite	165	.32	3.8	10.5	18.0	6	12
6492	do	do	Granite gneiss	175	.64	13.2	3.0	14.1	6	32
2545	Belton	Anderson	Ferruginous sandstone	200	5.09	10.3	3.9	(2)	(2)	49
8389	Williamston	do	Granite	165	.60	5.3	7.5	18.3	6	26
1758	Gaffney	Cherokee	Limestone	172	.11	5.7	7.0	8.7	8	44
2386	Blairs	Fairfield	Granite	165	.28	3.2	12.7	18.9	9	19
5568	Rion	do	do	168	.18	2.6	15.2	18.3	14	12
5586–1	do	do	Biotite granite	(2)	(2)	(2)	(2)	18.5	11	(2)
3893	Greenville	Greenville	Granite	165	.22	5.0	8.1	18.2	9	4
4725	(1)	do	Gneissoid granite	172	.33	5.1	7.9	(2)	(2)	15
3759	Lancaster	Lancaster	Altered rhyolite	168	.16	3.1	12.8	18.9	10	13
1449	Batesburg	Lexington	Gneissoid granite	162	.51	2.4	16.7	18.8	21	16
2024	(1)	Oconee	Marble	168	.81	5.5	7.3	7.1	5	79
3923	Beverly	Pickens	Granite gneiss	172	.28	5.5	7.2	17.7	6	21
4008	do	do	Granite	168	.47	3.5	11.4	17.8	13	18
374	Columbia	Richland	do	165	.17	2.9	13.9	(2)	(2)	(2)

[1] Exact locality not known.

[2] Test not made.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

SOUTH CAROLINA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
375	Pacolet	Spartanburg	Granite	165	.17	1.9	20.9	(1)	(1)	(1)
1603	Spartanburg	do	do	172	.48	2.1	19.2	18.2	10	20
1757	Pacolet	do	do	165	.33	4.1	9.8	17.7	15	14
1079	Spartanburg	do	Syenite	168	.40	2.4	16.9	18.4	10	20
2110	do	do	Biotite gneiss	175	.25	3.8	10.6	15.6	7	28
1217	Union	Union	Granite	168	.27	5.6	7.1	17.2	9	20
			SOUTH DAKOTA.							
2106	Lead	Lawrence	Altered diorite	168	0.28	2.2	17.9	17.3	15	67
2107	do	do	Granite porphyry	162	.73	3.9	14.0	17.5	10	95
2108	do	do	Altered rhyolite	147	4.56	3.8	10.4	15.8	16	500+
3372	do	do	Limestone	168	.21	5.6	7.2	15.6	5	61
3373	do	do	Sandstone	162	.44	3.2	12.5	19.0	10	0
3374	do	do	Dolomite	172	1.01	5.2	7.7	16.3	9	22
3375	do	do	Weathered chert	150	4.08	2.2	12.4	(1)	(1)	500+
449	Rowena	Minnehaha	Quartzite	165	.15	2.8	14.2	(1)	(1)	(1)
5582	Rapid City	Pennington	Marble	168	.14	4.0	10.0	14.4	4	35
5584	do	do	Dolomite	162	1.84	4.2	9.6	16.8	4	24
5672	do	do	Feldspathic quartzite	168	.21	2.4	16.7	19.0	25	24
			TENNESSEE.							
2104	Clinton	Anderson	Feldspathic limestone	165	0.84	2.7	14.9	16.5	11	76
2367	Camden	Benton	Chert	140	2.63	(1)	(1)	19.2	9	36
4333	Elizabethton	Carter	Argillaceous limestone	172	.25	3.3	12.1	17.7	18	31
5597	Quarry	do	Limestone	168	.34	4.4	9.1	16.9	9	64
9223	Watauga Point	do	Dolomite	178	.26	4.1	9.8	(1)	9	17
1325	Cumberland Gap	Claiborne	Limestone	172	.24	3.9	10.2	15.8	10	76
1326	do	do	do	168	.31	3.8	10.4	(1)	(1)	39
376	Nashville	Davidson	do	168	.15	5.0	8.0	(1)	(1)	(1)
377	do	do	do	168	.20	5.2	7.7	(1)	(1)	(1)
378	do	do	do	168	1.87	5.8	6.7	(1)	(1)	(1)
379	do	do	do	153	3.08	15.1	2.6	(1)	(1)	(1)
6557	do	do	do	168	.90	3.5	11.3	10.4	6	80

9667	do	do	do	168	.39	4.5	8.9	15.5	8	41
9668	do	do	do	168	2.19	7.3	5.5	9.0	4	34
9669	do	do	do	172	.36	4.5	8.9	16.0	6	25
1407	Perryville	Decatur	do	159	.95	4.2	9.5	13.8	7	41
8109	Charlotte	Dickson	Crystalline limestone	165	(1)	5.6	7.1	14.5	5	65
8110	do	do	Argillaceous limestone	162	1.04	6.4	6.2	13.1	4	78
8111	do	do	Limestone	156	3.10	5.1	7.9	16.3	3	72
8112	do	do	Argillaceous limestone	159	.25	7.3	5.5	17.1	5	48
8113	do	do	do	153	6.50	8.5	4.7	18.0	4	36
448	Chattanooga	Hamilton	Dolomitic limestone	168	.27	2.8	14.2	(1)	(1)	(1)
503	do	do	Limestone	168	1.10	4.0	10.0	(1)	(1)	(1)
8865	do	do	do	172	.28	(1)	(1)	15.5	4	29
8384	Paris (10 miles north of)	Henry	Sandstone	(1)	(1)	3.6	11.1	18.8	24	10
336	Graytown	Hickman	Ferruginous sandstone	168	4.75	11.5	3.5	(1)	(1)	(1)
337	do	do	Siliceous limestone	175	2.54	6 8	5.9	(1)	(1)	(1)
361	do	do	do	175	2.29	7.8	5.2	(1)	(1)	(1)
359	do	do	Limestone	193	3.29	7.9	5.1	(1)	(1)	(1)
338	do	do	Schist	156	1.72	4.4	9.2	(1)	(1)	(1)
8386	Stewart	Houston	Limestone	156	2.60	(1)	(1)	13.0	4	42
6739	Bay Springs	Jasper	Argillaceous limestone	153	3.50	(1)	(1)	11.2	6	27
5502	Straw Plains	Jefferson	Limestone	172	.11	4.0	9.9	(1)	10	20
5504	do	do	do	172	.42	4.5	8.9	(1)	8	15
5503	do	do	Dolomite	178	.27	2.7	14.6	(1)	17	21
1684	Lenoir City	Loudon	Limestone	172	.30	4.5	8.9	9.3	11	37
1205	Jackson	Madison	Ferruginous sandstone	178	2.82	(1)	(1)	(1)	3	84
7553	Clarksville	Montgomery	Limestone	168	1.12	4.4	9.1	15.6	6	171
7554	do	do	do	165	.74	5.0	8.0	15.0	5	46
7555	do	do	do	165	.50	4.6	8.7	14.9	7	64
7884	do	do	Argillaceous limestone	168	.76	4.1	9.9	16.0	7	65
7901	do	do	Limestone	165	.90	2.9	13.9	14.9	5	41
7902	do	do	do	168	.30	3.8	10.6	15.8	6	40
7903	Porters Quarry	do	Cherty limestone	172	.20	3.6	11.1	16.9	8	35
7904	Corbin Quarry	do	Argillaceous limestone	168	.60	4.4	9.1	15.6	9	42
8151	Clarksville	do	Limestone	168	.43	8.3	4.8	16.8	6	62
5686	Copper Hill	Polk	Copper slag	212	.69	5.2	7.6	(1)	(1)	39
4047	Oliver Springs	Roane	Chert	162	.74	20.0	2.0	(1)	(1)	11
6826	Harriman	do	Siliceous dolomite	178	.37	2.9	13.8	15.4	13	57
9098	do	do	Dolomite	175	.85	5.5	7.4	15.2	9	48
9653	do	do	Argillaceous limestone	168	.32	4.5	8.9	15.3	7	58
1240	Huntsville	Scott	Sandstone	153	2.21	8.8	4.6	(1)	(1)	24
3429	Bristol	Sullivan	Dolomite	175	.82	(1)	(1)	18.4	23	65
3431	do	do	do	175	.97	(1)	(1)	17.6	9	40
3432	do	do	do	178	.60	(1)	(1)	16.3	8	24
7008	do	do	Siliceous dolomite	175	.20	2.6	15.4	16.8	15	22
3430	do	do	Dolomitic limestone	175	.46	(1)	(1)	17.7	10	20
5440	Bluff	do	Limestone	168	.40	5.8	6.9	15.2	5	18
8007	Bristol	do	Feldspathic sandstone	159	1.63	(1)	(1)	18.7	5	41
7557	Franklin	Williamson	Limestone	168	.05	4.6	8.7	15.8	5	26
6200	(2)	Wilson	do	168	.44	5.4	7.4	14.7	3	13

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

TEXAS.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
1199	San Antonio	Bexar	Limestone	153	4.89	(1)	(1)	0	4	42
1202	.....do	.....do	.....do	143	8.29	(1)	(1)	0	3	21
1229	.....do	.....do	.....do	159	2.19	5.2	7.8	7.1	4	42
1500	Sand Pitt Station	Burleson	Sandstone	140	3.50	4.2	9.6	16.7	14	13
7609	New Braunfels	Comal	Limestone	165	.12	4.8	8.3	13.2	6	12
2084	El Paso	El Paso	Syenite	159	1.58	14.4	2.8	18.2	11	200
3727	.....do	.....do	.....do	159	1.40	4.1	9.9	18.1	13	150
2185	.....do	.....do	Syenite porphyry	159	1.68	2.5	15.7	18.2	9	257
7297	Dublin	Erath	Fossiliferous limestone	168	.64	6.7	6.0	14.6	4	61
1479	Denison	Grayson	Limestone	159	2.77	5.2	7.7	12.8	8	107
1480	.....do	.....do	.....do	162	1.94	4.4	9.2	15.4	9	81
3414	Denison (near)	.....do	.....do	162	2.20	(1)	(1)	15.9	11	23
3412	.....do	.....do	Ferruginous limestone	153	5.65	(1)	(1)	12.3	5	101
3413	.....do	.....do	.....do	159	2.71	(1)	(1)	15.6	8	74
5642	Denison	.....do	Argillaceous limestone	162	2.12	5.7	7.0	13.7	8	44
5852	.....do	.....do	.....do	159	2.87	6.6	6.0	14.6	6	41
5851	.....do	.....do	.....do	159	3.65	7.1	5.6	14.8	5	41
5709	Sherman	.....do	Altered granite	162	.61	4.8	8.3	19.3	8	83
5938	.....do	.....do	Argillaceous limestone	134	11.96	7.5	5.3	0	3	82
1958	Marshall	Harrison	Ferruginous sandstone	153	.52	22.9	1.7	2.7	3	176
2685	Hillsboro	Hill	Limestone	143	8.60	9.5	4.2	(1)	(1)	39
3869	Jacksboro	Jack	.....do	165	1.94	5.0	8.0	(1)	(1)	52
4412	Bridgeport	.....do	.....do	168	.34	5.5	7.3	14.3	5	50
5395	Stewarton	.....do	.....do	168	.82	4.9	8.2	14.8	9	32
7331	Jacksboro	.....do	.....do	165	1.63	5.2	7.7	13.5	4	93
7332	.....do	.....do	.....do	165	1.27	3.8	10.6	14.1	6	118
6314	Terrell	Kaufman	Siliceous limestone	153	4.11	12.0	3.3	(1)	(1)	202
7015	(2)	.....do	.....do	162	1.63	9.0	4.4	14.5	7	125
7016	Elmo Quarry	.....do	.....do	156	2.92	11.7	3.4	5.0	4	103
3147	Paris	Lamar	Sandstone	143	7.25	11.3	3.5	0	4	34
5532	(2)	.....do	Chert conglomerate	159	.49	4.9	8.1	19.4	10	4
7224	Tehuacana	Limestone	Argillaceous limestone	159	2.28	7.6	5.2	7.8	4	152
8591	Springfield	.....do	Limestone	162	1.45	4.5	8.9	15.0	7	68
8685	Tehuacana	.....do	Fossilliferous limestone	156	.27	8.2	4.9	4.0	4	35
6625	Marshall	Marshall	Iron conglomerate	(1)	(1)	26.0	1.5	(1)	(1)	152
5955	Richland	Navarro	Crystalline limestone	165	1.33	6.2	6.5	15.6	9	47
7070	Corsicana	.....do	Limestone	168	.60	5.5	7.3	14.1	6	21

7209	Richland	do	do	168	1.02	3.8	10.5	13.3	6	104
5432	Maryneal	Nolan	do	159	1.67	6.2	6.5	13.3	4	16
4131	Mineral Wells	Palo Pinto	do	165	1.22	5.5	7.3	14.5	7	69
6579	Strawn	do	do	168	.37	4.2	9.5	13.5	6	44
6396	(2)	Smith	Sandstone	162	.33	4.2	9.5	18.8	6	5
6398	(2)	do	Calcareous sandstone	165	.77	4.3	9.3	15.3	6	165
6397	(2)	do	Ferruginous conglomerate	172	3.31	26.8	1.5	(1)	(1)	11
5455	Abilene	Taylor	Limestone	165	1.50	4.0	9.9	14.2	7	21
7763	Austin (near)	Travis	Nephelite basalt	199	.21	1.7	23.5	18.7	24	16
8235	(2)	do	Limestone	(1)	(1)	(1)	(1)	15.7	5	62
8237	(2)	do	do	(1)	(1)	(1)	(1)	15.3	5	36
8238	(2)	do	do	(1)	(1)	(1)	(1)	16.0	4	35
8234	(2)	do	do	(1)	(1)	(1)	(1)	14.7	5	59
8236	(2)	do	Siliceous dolomite	(1)	(1)	(1)	(1)	16.2	14	33
8239	(2)	do	Rhyolite	(1)	(1)	(1)	(1)	18.7	22	78
7129	Knippa	Uvalde	Nephelite basalt	193	.39	1.8	22.2	17.5	15	67
1499	Grayville Quarry	Washington	Sandstone	143	2.67	5.0	7.9	16.7	12	93
2706	Round Rock	Williamson	Limestone	156	3.20	10.7	3.8	0	4	23
2707	do	do	do	159	2.64	7.1	5.6	13.2	4	46
2708	do	do	do	153	5.06	23.8	1.7	5.3	3	10
6600	Bridgeport	Wise	do	165	1.03	6.8	5.9	12.2	6	66
6667	do	do	do	168	.60	6.4	6.2	13.8	5	47
6684	(2)	do	do	168	.36	6.1	6.6	14.6	6	27
7242	Chico	do	do	168	.37	4.3	9.3	14.1	4	61
6683	(2)	do	do	168	.26	(1)	(1)	15.6	6	26

UTAH.

8191	(2)	Morgan	Conglomeratic limestone	165	0.41	7.2	5.6	(1)	(1)	(1)
1995	Salt Lake City	Salt Lake	Limestone	168	.77	2.9	13.7	16.8	12	451
1997	do	do	do	159	2.31	3.1	12.7	17.9	20	44
3371	(2)	do	do	165	.90	4.1	9.8	16.9	11	34
4121	Salt Lake City	do	Slag	206	.69	4.7	8.4	(1)	(1)	5
4122	Sandy City	do	do	218	.52	5.6	7.2	(1)	(1)	10
3332	Provo	Utah	Chert	168	1.15	5.8	6.9	17.4	6	21
3333	do	do	do	162	1.08	29.2	1.4	(1)	(1)	4
3334	do	do	Sericite schist	175	.16	6.2	6.4	16.2	7	19
3337	do	do	Siliceous limestone	162	2.36	3.6	11.0	18.2	20	59
3338	do	do	Limestone	165	.45	3.0	13.2	(1)	(1)	10
3339	do	do	Sandstone	168	.10	2.3	17.5	19.0	17	28
4744	do	do	Bituminous sandstone	140	1.34	5.2	7.8	5.6	6	500+

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

VERMONT.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
1946	Middlebury	Addison	Limestone	172	0.62	3.8	10.5	15.4	6	77
1220	North Pownal	Bennington	Marble	168	.36	5.8	7.0	8.9	6	71
1256	....do	....do	Limestone	172	.30	3.2	12.5	12.6	5	32
2889	Bennington	....do	....do	168	.41	5.0	8.0	(1)	(1)	53
2884	....do	....do	Dolomite	178	.35	4.2	9.4	15.0	8	41
2885	....do	....do	....do	178	.33	3.6	11.2	16.6	6	30
2886	....do	....do	....do	178	.34	4.1	9.8	14.5	7	13
2887	....do	....do	....do	175	.98	4.1	9.9	16.9	8	23
2888	....do	....do	Quartzite	165	.35	2.3	17.2	(1)	(1)	4
7109	....do	....do	....do	165	.29	6.8	5.9	19.2	4	4
6685	Hardwick	Caledonia	Granite	165	.39	4.2	9.5	17.5	6	35
3329	Berlington	Chittenden	Red dolomitic marble	175	.25	3.2	12.3	17.3	23	41
3330	....do	....do	Dolomitic marble	175	.39	2.5	16.0	16.6	18	31
8369	....do	....do	Dolomite	175	.42	4.4	9.1	17.2	15	10
8370	....do	....do	Argillaceous dolomite	178	.42	3.4	11.7	18.0	11	23
1678	St. Albans	Franklin	Feldspathic sandstone	168	.31	2.8	14.3	19.5	17	4
1681	....do	....do	....do	165	.26	2.3	17.4	19.3	12	3
1680	....do	....do	Dolomite	178	.42	4.2	9.6	16.3	9	9
1726	Swanton	....do	Limestone	172	.20	5.7	7.0	(1)	(1)	26
1679	Isle La Motte	Grand Isle	....do	168	.69	4.0	10.1	17.3	9	18
2372	Barton	Orleans	Biotite hornblende schist	181	.09	2.8	14.4	18.5	18	54
2373	....do	....do	Biotite granite	165	.28	8.1	5.0	17.7	5	39
726	Wallingford	Rutland	Amphibolite	193	.25	4.7	8.5	(1)	(1)	15
5543	East Wallingford	....do	Altered diabase	184	.96	2.6	15.3	17.2	15	111
5950	Rutland	....do	Siliceous dolomite	175	.28	3.0	13.2	18.3	10	31
6955	(2)	....do	Quartzite	165	.15	2.3	17.1	19.2	12	2
1646	Barre	Washington	Granite	165	.65	3.1	12.8	18.7	8	27
3192	....do	....do	Biotite granite	165	.29	4.9	8.2	18.8	9	15
8853	....do	....do	Granite	165	.44	3.0	13.3	(1)	7	(1)
6677	Bellows Falls	Windham	Biotite schist	178	.19	2.9	13.9	14.4	16	50
4092	Hartford	Windsor	Altered diabase	181	.41	2.8	14.1	16.9	10	150
4123	Woodstock	....do	Hornblende schist	187	.06	4.3	9.4	17.2	7	21

551	Charlottesville	Albemarle	Amphibolite	187	0.51	1.7	24.0	(1)	(1)	26
364	do	do	do	184	.32	4.1	9.9	(1)	(1)	36
548	do	do	do	187	1.62	2.1	19.5	(1)	(1)	73
549	do	do	do	190	.42	1.5	26.7	(1)	(1)	18
550	do	do	do	190	.23	2.2	18.3	(1)	(1)	27
2616	(2)	do	do	190	.34	3.3	12.0	16.3	12	19
2617	(2)	do	do	184	.47	3.5	11.3	(1)	(1)	93
489	Charlottesville	do	Limestone	168	.22	5.7	7.0	(1)	(1)	(1)
490	do	do	Diorite	196	.84	3.4	12.8	(1)	(1)	(1)
8647	University	do	do	190	.85	2.2	18.2	18.0	11	48
491	Charlottesville	do	Chlorite schist	187	.30	7.1	5.7	(1)	(1)	(1)
496	do	do	Hornblende schist	181	.52	1.9	21.1	(1)	(1)	(1)
497	do	do	do	187	1.08	4.1	9.7	(1)	(1)	(1)
498	do	do	Mica schist	168	.27	3.4	11.7	(1)	(1)	(1)
500	Shadwell Station	do	Chlorite schist	187	.32	3.5	11.3	(1)	(1)	26
552	Charlottesville	do	Hornblende schist	181	.86	2.5	16.2	(1)	(1)	31
612	(2)	do	Chlorite schist	187	.15	4.0	10.1	(1)	(1)	(1)
2038	(2)	do	do	190	.27	4.9	8.2	14.7	11	52
2581	Shadwell Dam	do	Chlorite epidote schist	184	.34	3.3	12.1	18.3	12	18
7186	Charlottesville	do	Muscovite schist	172	.27	4.7	8.4	16.8	7	23
2582	Riverview Cemetery	do	Chlorite epidote schist	184	.31	3.2	12.6	17.8	12	32
2698	Shadwell Dam	do	Hornblende epidote schist	187	.83	3.1	12.8	(1)	(1)	55
494	Charlottesville	do	Altered diabase	181	.56	2.3	17.3	(1)	(1)	(1)
8709	do	do	do	184	.28	2.9	13.8	17.0	24	16
499	Monticello Mountain	do	Quartzite	162	.44	3.6	11.1	(1)	(1)	(1)
3710	Charlottesville (near)	do	Quartz	165	.04	6.7	6.0	(1)	(1)	(1)
613	(2)	do	Banded gneiss	168	.19	4.1	9.8	(1)	(1)	(1)
2861	Observatory Mountain	do	Sericite gneiss	165	.26	5.6	7.1	17.6	7	18
2901	Charlottesville	do	Gneiss	168	.09	3.7	10.9	18.3	11	16
1934	Esmont	do	Slate	178	.41	(1)	(1)	(1)	6	(1)
1935	do	do	do	181	.18	(1)	(1)	(1)	18	(1)
1975	Faver Station	do	Feldspathic sandstone	168	.42	3.6	11.0	18.3	13	57
2580	Monticello Mountain	do	do	162	.28	3.4	11.9	19.3	8	17
3848	Charlottesville (near)	do	Ferruginous sandstone	184	.96	2.5	15.7	17.6	25	44
2277	Greenwood Depot	do	Altered trachyte	187	.14	3.5	11.5	18.0	23	39
2278	do	do	Biotite granite	168	.48	5.2	7.8	18.6	7	28
2279	do	do	do	175	.33	4.1	9.7	18.3	7	66
2699	Woods Crossing	do	Altered granite	162	.37	7.4	5.4	17.9	7	18
3924	University of Virginia	do	Porphyrytic granite	175	1.11	5.0	8.1	17.8	7	41
3709	Charlottesville (near)	do	Weathered biotite granite	168	.45	7.4	5.4	18.3	8	21
6945	Millers School	do	Gneissoid granite	168	.75	(1)	(1)	17.8	7	24
6946	do	do	do	175	.19	(1)	(1)	18.3	5	15
6948	do	do	Biotite granite	175	.19	(1)	(1)	18.8	14	13
7185	(2)	do	Altered biotite granite	172	.47	5.3	7.5	17.4	5	55
7459	(2)	do	Granite	165	.30	4.8	8.4	19.2	11	22
8646	Charlottesville	do	Altered andesite	187	.45	2.9	13.6	(1)	9	35
8686	do	do	Syenite	168	.19	4.4	9.1	17.3	10	17

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd

VIRGINIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
412	Alexandria	Alexandria	Mica schist	175	.37	4.3	9.3	(1)	(1)	(1)
1310	Chain Bridge	do	do	175	.30	4.8	8.4	17.1	6	31
1320	(2)	do	do	175	.24	4.2	9.6	(1)	(1)	29
1440	(2)	do	Quartz	165	.12	3.7	10.8	(1)	(1)	0
1441	(2)	do	Granite	172	.27	2.6	15.6	18.0	30	40
5952	Rosslyn	do	Altered granite	175	.26	2.9	13.6	17.8	11	22
1657	(2)	do	Granite gneiss	172	.35	4.7	8.5	(1)	(1)	28
5953	Covington (near)	Alleghany	Crystalline limestone	165	.64	4.2	9.5	14.1	6	43
9483	Clifton Forge	do	Feldspathic sandstone	168	1.04	(1)	(1)	15.8	20	74
1899	Amherst (1 mile south of)	Amherst	Quartzite	165	.05	4.3	9.3	(1)	(1)	2
1900	Sweet Briar Station (near)	do	Micaceous hornblende schist	187	.15	5.7	7.1	(1)	5	53
1901	Sweet Briar Station	do	Hornblende schist	187	.23	3.3	12.1	14.0	10	21
1976	McIvor Station (near)	do	do	190	.44	6.3	6.4	15.7	10	37
1984	Lynchburg Road	do	do	193	.37	2.7	15.0	17.0	10	12
2208	(2)	do	Mica schist	165	.82	4.4	9.0	14.9	7	12
2221	Lynchburg (near)	do	Hornblende schist	190	.33	5.5	7.3	16.2	8	22
2679	(2)	do	do	193	.30	4.2	9.5	17.7	9	13
2931	(2)	do	do	184	.88	12.8	3.1	16.2	6	24
3098	(2)	do	do	193	.21	3.0	13.2	17.9	8	15
4102	Monroe	do	do	193	.26	3.1	12.7	16.3	10	13
4419	do	do	do	193	.23	5.9	6.8	14.2	9	20
4861	Amherst Courthouse	do	Mica schist	168	.21	8.2	4.9	18.3	10	18
4862	do	do	Hornblende biotite schist	187	.25	6.2	6.5	16.0	7	10
1972	Amherst Depot	do	Epidosite	190	.61	7.4	5.4	19.3	23	14
1977	Monroe	do	do	206	1.10	(1)	(1)	10.7	10	44
1973	Amherst Depot (near)	do	Biotite gneiss	172	.48	4.7	8.5	16.5	9	58
1978	Monroe	do	do	172	.68	(1)	(1)	16.7	7	38
1982	(2)	do	Diorite gneiss	184	1.19	5.7	7.0	9.0	6	52
3381	James River	do	Hornblende gneiss	187	.59	16.4	2.4	12.3	5	13
3521	(2)	do	Biotite gneiss	172	.28	9.2	4.3	17.0	6	28
4203	Monroe	do	do	168	.55	7.2	5.6	18.2	5	29
4204	do	do	do	172	.60	7.4	5.4	17.8	5	25
4389	do	do	Gneiss	190	.63	5.3	7.5	15.7	7	20
4860	Amherst Courthouse	do	Biotite gneiss	172	.33	5.3	7.6	14.6	8	14
4863	do	do	do	175	.25	5.3	7.5	17.6	11	13
4937	do	do	do	168	.44	6.6	6.0	16.8	12	8
6636	Amherst Courthouse (near)	do	Granite gneiss	175	.73	8.7	4.6	9.2	3	43
6823	(2)	do	Biotite gneiss	181	.69	7.9	5.1	13.7	5	56
2223	(2)	do	Amphibolite	187	1.04	10.3	3.9	13.5	7	75

3019	(2)	do	Altered diabase	190	.21	1.8	22.0	18.6	24	11
6824	(2)	do	Altered diorite	190	.88	2.4	16.8	17.9	8	48
7051	Clifford	do	Gneissoid granite	168	.29	5.3	7.5	17.7	4	16
7891	Madison Heights	do	Altered biotite granite	175	.30	4.7	8.4	18.0	8	40
2057	Appomattox	Appomattox	Sandstone	162	1.07	(1)	(1)	16.5	9	17
5926	Basic	Augusta	Quartzite	165	.27	4.6	8.6	(1)	(1)	4
1904	Staunton (near)	do	Dolomitic limestone	175	1.19	4.5	8.9	15.0	8	68
2087	Staunton (1 mile north of)	do	Limestone	168	1.98	3.4	11.8	15.5	11	37
2680	Craigsville	do	do	168	.32	3.8	10.6	17.7	9	26
2681	do	do	do	168	.27	4.6	8.8	15.7	7	32
2899	Fordwick (near)	do	do	172	.41	(1)	(1)	16.0	7	48
5384	Brookwood	do	do	168	.67	(1)	(1)	15.4	5	23
5476	Waynesboro	do	do	178	.22	5.4	7.4	18.3	19	20
5620	Staunton	do	do	168	.08	5.1	7.8	15.3	6	31
2897	Fordwick (near)	do	Chert	165	.43	3.9	10.3	19.5	7	18
2898	do	do	Dolomite	172	.68	4.7	8.5	15.5	11	42
4738	Staunton	do	Dolomite	178	.14	3.2	12.7	13.2	11	13
5383	Brookwood	do	do	175	.66	3.1	12.8	16.5	16	23
6580	Staunton	do	do	175	.90	3.7	10.8	16.8	8	44
3095	(2)	do	Chlorite schist	187	.37	2.9	13.7	16.8	22	34
3101	Basic (near)	do	Sandstone	168	2.29	4.7	8.5	16.1	6	186
3724	Waynesboro	do	do	162	1.08	7.9	5.1	19.0	6	6
3725	Staunton	do	Slate	168	.65	12.4	3.2	6.3	4	29
5437	Waynesboro	do	Calcareous slate	172	.42	4.6	8.8	11.8	10	32
8741	(2)	do	Altered diabase	181	.39	3.8	10.6	13.2	9	20
1968	Boonsboro	Bedford	Biotite gneiss	162	1.16	8.8	4.6	10.8	2	76
2912	(2)	do	do	175	.40	11.1	3.6	15.8	6	29
4678	Bedford City	do	Granite gneiss	172	.38	4.4	9.1	17.8	7	28
8804	Albert	do	do	175	1.26	5.2	7.7	18.8	9	23
1969	Lynchburg	do	Hornblende epidote schist	184	.79	8.6	4.7	12.3	(1)	44
2913	(2)	do	Hornblende schist	193	.38	9.4	4.2	(1)	(1)	24
3088	Lynchburg (near)	do	Biotite schist	178	.46	7.3	5.5	16.7	8	28
8021	Holcomb Rock	do	Smelter slag	187	1.50	10.2	3.9	(1)	(1)	4
2756	Gala	Botecourt	Quartzite	162	.71	2.0	20.2	(1)	(1)	7
2757	do	do	Pink quartzite	165	.19	3.2	12.3	(1)	(1)	4
2050	(2)	Campbell	Granite	165	.51	7.5	5.3	16.5	6	28
3326	Alta Vista	do	do	162	.29	3.7	10.8	18.7	10	8
2162	Lynchburg	do	Quartzite	165	.20	2.6	15.5	19.0	14	10
2601	(2)	do	Limestone	168	.51	5.7	7.0	14.3	4	56
2602	(2)	do	do	168	.15	4.2	9.5	17.1	5	47
2718	Lynchburg (near)	do	Hornblende schist	190	.49	4.4	9.0	15.2	8	15
2905	(2)	do	Quartz schist	168	.18	3.9	10.3	(1)	(1)	15
5715	Alta Vista	do	Biotite schist	168	.17	3.3	12.0	18.3	17	21
6599	do	do	Quartz mica schist	168	.41	3.3	12.0	17.7	18	42
6821	(2)	do	Muscovite schist	172	.40	4.6	8.8	14.3	8	21
3327	Alta Vista	do	Mica gneiss	172	.19	2.3	17.1	18.0	18	15
5050	Lynchburg	do	Sericite gneiss	168	.37	3.3	12.0	18.7	9	6
4619	(2)	do	Calcareous sandstone	172	2.81	4.2	9.4	13.6	6	22
3275	Randolph	Charlotte	Altered diorite	181	.59	2.8	14.5	18.8	26	21
3276	do	do	Hornblende granite	162	1.61	4.0	9.9	18.6	9	62

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

VIRGINIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
1393	Norfolk	Chesterfield	Granite	165	.44	2.5	16.1	(1)	(1)	88
1774	Richmond (near)	do	do	165	.31	3.2	12.3	17.5	11	33
3239	(2)	do	do	165	.23	2.1	19.0	18.6	13	20
7586	Berryville	Clark	Argillaceous limestone	172	.16	2.5	16.0	17.4	13	30
492	Craigsville	Craig	Dolomitic limestone	168	.31	4.1	9.7	(1)	(1)	22
2281	Stevensburg (near)	Culpeper	Metamorphic sandstone	172	1.07	2.2	18.0	19.3	20	25
2282	Mount Run Mill (near)	do	do	168	1.38	2.3	17.7	19.1	14	98
2283	Kellyville (near)	do	do	172	.67	2.6	15.6	18.8	60	57
2284	Brandy Station	do	do	159	2.77	2.4	16.7	18.3	30	344
2325	Culpeper (near)	do	Ferruginous sandstone	159	3.04	2.3	17.2	16.8	19	130
3862	(2)	do	Argillaceous sandstone	175	.33	3.1	12.9	17.8	24	27
4992	(2)	do	Indurated argillaceous sandstone	168	.64	2.3	17.4	16.3	32	27
6258	(2)	do	Argillaceous sandstone	153	4.62	4.6	8.6	12.3	9	195
7063	Culpeper (near)	do	do	162	2.51	4.7	8.5	14.7	12	47
2324	do	do	Amphibolite	190	1.18	2.8	14.5	16.6	24	235
2326	do	do	do	181	1.65	2.1	19.4	17.8	11	92
7515	Culpeper	do	do	187	.22	4.6	8.7	17.5	18	112
8321	Culpeper (7 miles from)	do	do	193	.41	2.3	17.2	17.7	9	26
8433	Griffinsburg	do	do	193	.46	1.5	26.6	18.5	16	36
8619	do	do	do	196	.40	2.8	14.1	18.3	6	22
3520	Culpeper (near)	do	Altered diabase	184	.85	3.3	12.0	18.4	24	49
3731	Stevensburg Township	do	Hypersthene diabase	190	.07	3.7	10.8	18.0	11	20
3867	(2)	do	Slate	175	.32	2.8	14.3	16.8	32	20
4816	Brandy Station (near)	do	do	175	.42	(1)	(1)	16.8	26	30
4817	Carico Mill (near)	do	do	175	.32	2.8	14.4	17.3	24	14
3937	Brandy Station	do	Chert	181	.27	(1)	(1)	18.9	17	32
4089	Buena	do	Gabbro	193	.41	(1)	(1)	18.2	14	12
5878	Culpeper	do	Altered basalt	187	.23	3.0	13.3	18.2	47	41
5879	do	do	do	178	1.97	2.8	14.5	18.5	20	31
7168	Culpeper (3 miles northeast of)	do	Altered basalt breccia	187	.41	4.0	10.1	11.8	5	85
6543	(2)	do	Biotite schist	175	.16	3.8	10.5	15.2	9	72
6544	(2)	do	do	168	.37	4.6	8.6	14.9	9	50
8320	Culpeper (9 miles from)	do	Sericite schist	171	.60	5.9	6.8	18.5	4	51
6545	(2)	do	Mica gneiss	168	.63	8.9	4.5	15.1	7	75
8318	Boston (near)	do	Micaceous quartzite	165	.39	4.6	8.7	18.7	7	22
8319	Hazel River Bridge (near)	do	Biotite gneiss	168	.25	2.9	14.0	18.2	11	34
8432	Griffinsburg	do	Granite gneiss	165	.43	4.7	8.4	18.0	5	27
8618	do	do	do	168	.23	4.1	9.8	18.5	6	26
6796	(2)	Dinwiddie	Granite	165	.46	(1)	(1)	18.8	5	(1)

1196	Fairfax Courthouse	Fairfax	Limestone	168	.47	(1)	(1)	15.8	6	57
1197	do	do	do	168	.20	(1)	(1)	13.2	6	24
1198	do	do	do	168	.73	(1)	(1)	18.2	(1)	93
1318	Fredericksburg	do	Granite gneiss	168	.31	3.5	15.6	(1)	(1)	30
3017	Occoquan	do	Sericite gneiss	172	.23	2.1	19.2	18.8	14	17
4397	(2)	do	Granite gneiss	168	.45	4.3	9.3	18.2	11	24
5010	(2)	do	Sericite gneiss	168	1.00	9.0	4.5	15.7	8	48
5011	(2)	do	Biotite gneiss	175	.39	4.1	9.7	19.0	11	26
5012	(2)	do	Muscovite gneiss	165	.88	10.5	3.8	16.0	7	29
5014	(2)	do	Biotite gneiss	178	.17	4.0	10.0	17.8	12	26
7317	Occoquan	do	Sericite gneiss	168	.45	2.2	18.3	18.5	17	112
8226	McLean	do	Granite gneiss	175	.38	3.7	10.8	18.5	4	28
1954	Herndon	do	Diabase	168	.19	(1)	(1)	18.7	19	45
6315	Clifton Station	do	do	184	.50	3.0	13.3	18.0	14	146
7187	Clifton	do	do	184	.37	2.5	15.7	17.4	15	115
7238	(2)	do	Altered diabase	175	1.88	3.7	10.9	16.0	4	171
2000	Herndon	do	Feldspathic sandstone	156	2.45	5.1	7.8	17.4	11	500+
3445	Falls Church	do	Muscovite granite	165	.45	3.3	12.0	18.9	15	68
4988	Falls Church (near)	do	Biotite granite	175	.13	2.9	13.6	18.4	13	21
5005	Falls Church	do	Gneissoid granite	165	1.42	5.5	7.2	17.8	8	29
5013	(2)	do	Biotite granite	172	.34	5.1	7.9	18.7	13	33
4173	(2)	do	Epidosite	187	.53	3.7	10.8	16.3	10	31
5371	Fairfax Courthouse (near)	do	Altered diorite	178	.29	5.1	7.8	17.4	7	21
6043	Fairfax	do	Serpentine	175	1.14	4.9	8.2	15.8	11	56
8779	Vienna	do	Epidote chlorite schist	168	.65	8.1	4.9	17.4	13	12
782	Catletts Station	Fauquier	Diabase	187	.14	1.8	21.7	(1)	(1)	(1)
5762	Warrenton	do	do	187	.45	2.1	18.7	18.6	24	41
6603	Rectortown	do	Altered diabase	(1)	(1)	(1)	(1)	17.3	6	61
8305	Delaplane	do	do	187	.70	2.3	17.4	18.7	38	41
1600	Broad Run	do	Quartzite	165	.32	3.1	13.1	(1)	(1)	4
4617	do	do	Micaceous quartzite	165	2.95	2.6	15.4	(1)	(1)	2
4900A	do	do	Quartz	165	.10	(1)	(1)	19.5	7	3
1785	Bealton (1 mile east of)	do	Slate	168	1.37	3.8	10.6	11.7	10	255
1786	Remington (3 miles east of)	do	do	168	1.29	2.2	18.5	16.0	21	207
2414	The Plains (1½ miles north of)	do	Epidosite	187	.59	2.0	19.6	18.6	22	29
4900B	Broad Run	do	do	200	.26	(1)	(1)	19.0	8	3
5639	Warrenton	do	do	181	.56	4.0	10.0	(1)	(1)	9
5640	do	do	do	193	1.05	3.3	12.0	18.7	16	73
5641	do	do	do	187	1.65	3.6	11.2	19.3	16	18
2415	The Plains (4 miles north of)	do	Schist	168	.63	5.4	7.4	17.8	11	22
2935	(2)	do	Epidote chlorite schist	190	.14	2.8	14.2	16.8	20	21
3132	The Plains	do	Hornblende epidote schist	190	1.28	8.8	4.6	17.9	20	152
3499	(2)	do	Hornblende schist	190	.34	4.6	8.7	15.2	9	24
2416	The Plains (4¾ miles north of)	do	Gneiss	168	.47	4.1	9.8	18.7	7	20
3084	(2)	do	Sericite gneiss	165	.35	3.4	11.7	18.8	9	15
3343	(2)	do	Gneiss	172	.28	6.0	6.7	17.3	10	34
4175	Catlett	do	Gabbro	187	.34	1.8	22.2	18.5	20	48
8304	Delaplane	do	Hornblende granite	165	.98	7.9	5.1	19.5	4	64
4900C	Broad Run (near)	do	Sandstone	165	.14	(1)	(1)	19.0	11	(1)
5923	Strathmore	Fluvanna	Chlorite epidote schist	175	.36	5.0	8.0	16.1	6	23
6465	(2)	do	Sericite chlorite schist	172	.43	4.1	9.8	13.0	9	17

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

VIRGINIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
5678	Eggleston (near)	Giles	Dolomite	178	.44	4.4	9.2	16.0	24	27
5978	Pembroke	do	Dolomitic marble	178	.27	3.1	12.8	14.7	11	15
1317	Boscobel	Goochland	Granite gneiss	165	.30	4.0	9.9	18.6	(1)	61
1857	Penitentiary Farm	do	Gneiss	168	.30	3.1	13.1	17.6	9	20
1858	(2)	do	Biotite gneiss	162	.58	6.7	5.9	18.0	8	56
1859	(2)	do	Granite gneiss	165	.26	4.0	10.0	18.2	9	110
3240	(2)	do	do	165	.21	3.5	11.4	19.0	12	12
5924	Boscobel	do	do	162	.28	4.5	9.0	19.3	8	50
8712	(2)	do	Granite	162	.52	4.8	8.3	18.7	15	38
1778	Emporia	Greensville	do	168	.19	2.5	15.7	18.7	10	25
3468	Emporia (near)	do	Granite gneiss	181	.38	3.5	11.4	17.8	9	39
3036	Virgilina	Halifax	Altered andesite	172	.15	3.3	12.2	(1)	(1)	19
3172	do	do	Epidote chlorite schist	168	.18	3.7	10.9	(1)	(1)	15
1878	Verdow Station (near)	Hanover	Granite	168	.44	2.8	14.3	19.0	19	22
1823	Richmond	Henrico	do	165	.54	4.1	9.7	17.8	8	16
3933	do	do	Biotite granite	165	.21	3.1	13.0	18.8	11	22
8747	do	do	Granite	162	.67	4.4	9.1	19.0	7	10
8942	do	do	Aplitic granite	165	.53	2.3	17.4	18.2	8	30
3266	(2)	do	Hornblende epidote schist	190	.76	2.5	16.1	18.0	9	50
2863–1	(2)	Lee	Limestone	168	.48	4.0	10.0	16.5	10	49
2864–2	(2)	do	do	168	.07	4.8	8.3	16.0	6	25
1011	Paeonian Springs	Loudon	Gneiss	168	.43	5.7	7.0	18.0	14	52
1012	do	do	Epidosite	172	.45	3.6	11.2	19.1	14	83
1322	Mount Weather	do	Hornblende schist	187	1.87	2.9	14.0	13.1	13	71
3817	Paeonian Springs	do	do	187	.75	3.4	11.7	19.0	26	19
1991	Belmont Park	do	Gabbroitic diabase	187	.92	2.8	14.4	18.5	16	57
1690	Belmont Park (near)	do	Diabase	187	.35	3.1	12.8	18.2	14	17
9047	Belmont Park	do	do	187	.43	2.6	15.5	18.3	13	22
3493	Broad Run	do	Gabbro	187	.21	2.8	14.4	18.6	19	26
7832	(2)	do	Cherty limestone	168	.47	5.3	7.5	13.2	6	46
4826	(2)	do	Quartzite	165	.17	3.5	11.3	19.3	21	2
871	Mineral	Louisa	Chlorite gneiss	187	.16	8.1	4.9	(1)	(1)	87
3265	(2)	Lunenburg	Epidote quartzite	168	.76	2.7	14.9	18.2	10	6
5716	Kenbridge	do	Gneissoid granite	162	.15	3.1	12.8	19.1	8	17
3150	Chase City	Mecklenburg	Sericite schist	168	.73	8.5	4.7	12.4	10	15
3149	do	do	Epidote schist	184	.57	3.5	11.5	14.5	12	16
3176	Clarksville	do	Biotite schist	168	.85	4.2	9.5	16.3	9	66
7849	(2)	do	Mica schist	165	1.01	3.3	12.3	10.2	9	17
3174	Clarksville	do	Syenite	153	2.88	3.5	11.5	18.3	11	43

3267	do	do	do	153	3.06	(1)	(1)	18.6	17	20
7850	(2)	do	Altered syenite	(1)	(1)	7.2	5.5	16.4	9	107
3175	Clarksville	do	Sericite gneiss	168	.31	4.3	9.3	15.9	6	13
3268	do	do	do	172	.21	(1)	(1)	17.5	9	11
3269	do	do	Granite gneiss	165	.54	2.2	17.9	19.3	25	18
537	Blacksburg	Montgomery	Dolomite	181	.29	3.6	11.2	(1)	(1)	38
2820	Rockfish	Nelson	Sericite gneiss	175	.34	7.9	5.1	17.3	5	16
2821	do	do	do	168	.41	6.0	6.7	17.3	6	31
6475	Arrington	do	Hornblende gneiss	193	.49	2.5	16.0	17.3	10	19
6494	(2)	do	Biotite gneiss	175	.23	5.3	7.6	18.5	6	41
3096	Afton	do	Epidote chlorite schist	187	.73	3.6	11.2	18.5	7	29
5714	Oak Ridge	do	Quartz	165	.06	8.2	4.9	(1)	(1)	0
5925	Greenway	do	Feldspathic quartzite	165	.40	2.5	16.1	18.8	11	4
6474	Arrington	do	Altered biotite granite	175	.40	5.6	7.2	16.3	6	45
8428	do	do	Gneissoid granite	165	.39	3.5	11.3	18.8	9	21
8225	Arrington (near)	do	Amphibolite	190	.12	2.4	16.5	18.0	8	12
6769	(2)	do	Blast furnace slag	(1)	(1)	17.3	2.3	(1)	(1)	2
1584	Crewe (near)	Nottoway	Granite gneiss	165	.56	9.7	4.1	14.6	6	10
2168	(2)	do	Biotite gneiss	175	.99	10.4	3.9	16.5	5	48
2169	(2)	do	Granite	162	.47	5.0	8.0	18.7	10	29
2170	(2)	do	do	162	.92	3.4	11.8	18.2	7	39
6604	Blackstone	do	do	165	.68	6.6	6.1	18.2	8	19
1171	Orange	Orange	Altered diabase	187	.32	2.2	18.5	19.2	34	55
6958	(2)	do	Quartzite	165	.31	4.0	10.0	19.3	11	0
3256	Danville	Pittsylvania	Gneissoid granite	165	.47	2.3	17.7	19.1	24	22
3384	do	do	Biotite gneiss	168	.15	(1)	(1)	17.8	10	13
4757	(2)	do	Granite gneiss	162	.22	3.4	11.8	18.8	9	39
4758	(2)	do	do	165	.22	3.6	11.1	18.3	10	7
4876	(2)	do	Mica gneiss	165	.34	3.8	10.4	17.6	8	12
5452	(2)	do	Granite gneiss	168	.18	(1)	(1)	17.5	7	14
7052	Chatham (near)	do	Ferruginous sandstone	162	1.58	3.1	12.9	15.5	7	67
2862	Farmville (near)	Prince Edward	Syenite gneiss	168	.50	5.8	6.9	17.5	6	51
2875	do	do	Quartz	165	.09	9.2	4.3	(1)	(1)	(1)
4058	Farmville	do	Altered granite	162	.37	3.6	11.0	18.5	10	52
876	Manassas	Prince William	Gabbroitic diabase	187	.50	2.2	18.0	18.6	25	99
1599	do	do	Diabase	184	.96	2.9	13.6	17.9	17	48
8589	do	do	Altered diabase	187	.62	3.7	10.9	18.3	5	121
1312	do	do	Ferruginous sandstone	156	3.36	(1)	(1)	18.1	47	101
1666	Nokesville	do	do	159	3.81	(1)	(1)	5.7	6	84
1711	Manassas	do	do	168	1.13	3.6	11.0	18.0	28	133
9091	do	do	do	153	3.09	14.5	2.8	6.7	4	142
9092	do	do	do	(1)	(1)	(1)	(1)	5.7	6	(1)
5492	Nokesville	do	do	162	2.99	4.0	9.9	16.3	7	50
1661	Occoquan	do	Granite gneiss	168	.88	3.9	10.4	19.0	13	7
3352	Haymarket	do	Altered basalt	175	2.31	3.0	13.3	18.3	24	255
3353	Manassas (near)	do	do	178	2.54	2.8	14.5	(1)	(1)	212
3354	(2)	do	do	181	1.82	2.7	14.9	18.0	12	87
5876	Gainesville	do	Epidosite	181	1.03	3.3	12.3	19.5	15	10
7732	(2)	do	Altered granite	165	.52	3.7	10.9	18.7	17	20
6540	(2)	Pulaski	Argillaceous limestone	172	2.03	5.4	7.4	14.3	4	43
6577	(2)	do	do	175	.31	3.7	10.8	16.7	22	166

(1) Test not made.

(2) Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

VIRGINIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
7625	Dublin (near)	Pulaski	Argillaceous limestone	175	.20	3.1	12.7	18.0	22	11
8341	Pulaski	do	do	165	1.86	5.7	7.1	18.3	9	37
6541	(1)	do	Carbonaceous dolomite	175	.54	5.2	7.6	17.0	11	32
8340	Pulaski	do	Dolomite	175	.58	5.2	7.7	17.0	6	46
8342	do	do	do	175	.88	4.4	9.1	17.0	8	49
8343	do	do	Siliceous dolomite	168	1.18	13.3	3.0	17.0	5	47
8405	do	do	Dolomite	178	.46	4.0	10.0	17.0	10	23
7452	Fint Hill	Rappahannock	Hornblende epidote schist	187	.96	4.5	8.8	15.8	9	99
1623	Roanoke	Roanoke	Dolomite	172	.54	3.4	11.7	16.3	13	87
1624	do	do	do	178	.55	3.4	11.7	16.6	14	22
1630	do	do	do	181	.47	6.1	6.6	17.6	7	44
3357	Lithia	do	Limestone	168	.85	3.2	12.5	16.8	5	33
5461	Roanoke	do	Dolomitic limestone	178	.14	3.9	10.3	18.3	11	33
3450	do	do	Quartzite	162	.58	4.8	8.3	19.4	14	4
4848	Lexington	Rockbridge	Limestone	168	.16	6.5	6.2	15.0	7	15
4849	do	do	do	168	.21	4.7	8.4	(2)	(2)	12
4850	do	do	do	168	.16	4.7	8.5	14.5	5	10
4858	do	do	Argillaceous limestone	168	.12	4.7	8.4	16.3	9	11
4859	do	do	do	168	.13	4.2	9.6	17.3	16	10
5920	Greenlee	do	Dolomitic marble	178	.33	4.4	9.2	16.8	13	22
4600	Bluffs	Rockingham	Limestone	168	.35	4.1	9.7	15.8	7	49
5382	Bluff Water Station	do	do	168	.16	3.5	11.3	15.5	11	29
5385	do	do	do	172	.79	3.8	10.5	16.4	13	34
6380	(1)	do	do	168	.24	6.1	6.6	14.3	7	62
5700	Harrisonburg	do	Cherty limestone	156	2.07	3.4	11.9	19.2	16	9
6534	(1)	do	Feldspathic sandstone	165	.54	2.4	16.5	18.7	14	61
6578	(1)	do	Calcareous sandstone	162	.65	3.7	10.8	18.6	9	20
6379	(1)	do	Dolomite	175	.08	1.8	22.2	16.8	17	38
8140	Mount Crawford	do	do	177	.41	2.5	16.0	17.8	24	45
3259	Castlewood	Russell	do	175	.40	2.4	16.9	16.7	13	35
3911	Blackford	do	do	178	.35	5.0	7.9	16.3	4	11
3260	Castlewood	do	Limestone	172	.17	3.2	12.7	14.0	5	57
4669	Honaker	do	Argillaceous limestone	178	.09	4.0	10.1	15.7	8	19
4670	do	do	Limestone	172	.15	4.2	9.6	15.3	(2)	24
5375	St. Paul	do	do	168	.33	3.7	10.9	17.1	11	24
3008	Strasburg	Shenandoah	do	168	.19	5.1	7.8	15.5	4	25
3009	do	do	do	168	.39	5.6	7.1	15.2	4	18
3511	do	do	do	168	.13	5.3	7.5	16.0	5	34
3512	do	do	do	175	.22	4.2	9.6	16.0	5	30
5820	(1)	do	Calcareous sandstone	168	.61	2.7	15.1	15.3	15	84

5832	North Holston	Smyth	Carbonaceous limestone	168	.24	4.0	10.0	16.3	15	31
6942	do	do	Argillaceous limestone	175	.88	4.0	10.0	16.0	16	41
7064	Marion	do	Limestone	168	.15	5.1	7.8	16.0	8	21
5833	North Holston	do	Feldspathic sandstone	168	.67	3.1	13.0	17.3	13	56
5885	do	do	Sandstone	162	.87	4.3	9.3	17.5	10	17
750	Fredericksburg	Spotsylvania	Oolitic limestone	175	1.46	5.5	7.3	(2)	(2)	(2)
3794	Courthouse District	do	Gneiss	165	.16	12.9	3.1	18.2	4	19
3795	do	do	do	165	.42	3.9	10.2	18.3	10	17
3277	(1)	Tazewell	Dolomite	178	.26	3.4	11.8	17.1	19	54
5854	Tazewell	do	Ferruginous sandstone	165	.96	2.7	15.0	18.7	19	54
6393	do	do	Feldspathic sandstone	162	1.42	2.4	16.4	16.9	6	34
6701	do	do	Ferruginous sandstone	181	1.99	4.2	9.5	15.6	5	35
7217	Burkes Garden	do	Dolomitic sandstone	175	.63	3.4	11.8	15.6	8	(2)
1728	Meadowview	Washington	Limestone	172	.59	3.5	11.4	16.2	9	46
1729	do	do	Dolomitic limestone	175	.50	3.6	11.1	16.3	14	52
6272	Bristol	do	Argillaceous limestone	175	.52	3.7	10.8	17.4	3	30
6274	do	do	Limestone	172	.34	4.4	9.1	16.6	8	57
6524	do	do	Siliceous limestone	168	.63	4.9	8.2	16.3	9	82
6571	do	do	Limestone	168	.15	4.6	8.7	14.8	8	63
7537	Wallace	do	do	175	.10	2.9	13.6	15.3	9	58
7538	do	do	Dolomitic limestone	175	.18	2.8	14.1	18.6	11	72
7725	Meadowview	do	Argillaceous limestone	175	.21	4.0	10.0	17.8	8	37
7726	do	do	do	153	.38	3.4	11.6	17.5	14	34
8227	Wallace	do	do	172	.62	2.9	13.7	18.3	16	63
1923	Meadowview	do	Chert	175	.56	5.3	7.6	15.3	11	31
5821	Damascus	do	Ferruginous sandstone	165	.74	3.6	11.3	18.8	(2)	32
5823	do	do	Dolomite	172	1.20	4.1	9.8	16.3	11	42
5824	do	do	do	177	.44	6.4	6.2	17.3	4	18
6250	Bristol	do	Cherty dolomite	175	.34	5.1	7.9	17.2	3	36
6251	do	do	Dolomite	178	.28	5.3	7.6	17.0	5	37
6273	do	do	do	178	.31	3.6	11.2	15.0	9	21
6525	do	do	do	178	.53	5.2	7.7	15.2	7	48
5822	Damascus	do	Travertine	168	.07	5.9	6.8	12.0	4	24
5120	Big Stone Gap	Wise	Limestone	165	1.28	4.8	8.3	15.8	6	30
6048	do	do	do	168	.58	4.0	10.0	10.5	7	36
6049	do	do	do	168	.27	3.5	11.4	15.7	7	32
8344	(1)	do	Siliceous limestone	165	.44	3.6	11.1	18.3	13	66
6050	Big Stone Gap	do	Dolomite	172	1.21	3.8	10.6	15.7	12	51
8345	(1)	do	Feldspathic sandstone	162	1.62	9.3	4.3	13.0	6	99
8399	Big Stone Gap	do	Sandstone	162	.61	3.9	10.2	18.8	7	20
8578	do	do	Feldspathic sandstone	162	1.75	5.1	7.8	12.7	7	106
8398	do	do	Blast furnace slag	162	1.45	11.0	3.6	15.0	6	3
5745	Ivanhoe	Wythe	Dolomitic marble	178	.16	5.3	7.6	15.8	16	22
6910	Speedwell	do	Dolomite	178	.28	5.5	7.3	16.1	9	16
8818	(1)	do	do	178	.49	4.0	10.0	16.2	10	20
8819	(1)	do	Argillaceous limestone	178	.23	3.7	10.8	17.8	20	14
9259	(1)	(1)	Sericite schist	168	.24	4.5	8.9	15.8	8	26
4034	(1)	(1)	Diabase	187	.35	2.1	19.2	18.5	21	31

[1] Exact locality not known.

[2] Test not made.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

WASHINGTON.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
4539	Lind	Adams	Basalt	184	.24	2.2	18.4	18.3	14	25
4561	Asotin	Asotin	do	184	.12	2.3	17.2	18.0	20	34
4562	Zindel	do	Dolomitic marble	168	.14	7.5	5.3	(1)	(1)	16
4769	Hoquian	Chehalis	Basalt	178	.37	2.2	18.5	18.2	27	41
4478	Vulcan	Chelan	do	178	.15	2.0	20.0	18.0	17	19
4558	Columbia River Station	do	do	178	.18	(1)	(1)	19.0	20	10
4489	Cashmere	do	Feldspathic sandstone	162	.73	6.4	6.3	(1)	(1)	67
4524	Wenatchee	do	Biotite gneiss	168	.21	5.2	7.8	(1)	(1)	28
4580	Leavenworth	do	Granodiorite	172	.40	7.0	5.7	17.0	4	15
2918	Fishers Landing	Clarke	Olivine basalt	175	1.33	2.5	16.0	17.8	15	8
2919	do	do	do	168	1.88	2.9	13.7	17.8	13	4
4451	Vancouver	do	Basalt	175	.66	3.0	13.2	19.3	19	13
4454	Yacolt	do	Altered basalt	175	.27	2.5	15.8	16.8	15	120
4566	Fisher	do	Basalt	178	.30	2.9	13.8	18.0	25	19
4488	Dayton	Columbia	do	178	.36	2.8	14.3	18.2	16	6
4560	do	do	do	178	.56	2.3	17.4	17.7	21	3
2850	Kelso (3 miles from)	Cowlitz	Augite andesite	181	.17	3.2	12.6	18.8	21	176
4432	Castle Rock	do	Basalt	178	.42	5.2	7.7	17.4	11	117
4436	Ladu (2 miles northwest of)	do	do	187	.29	2.4	16.5	18.8	13	19
4442	Kalama (3 miles north of)	do	do	175	.27	3.2	12.5	16.8	15	500+
4444	Stella (¾ mile east of)	do	do	168	1.77	2.5	16.1	8.5	14	7
4468	Carrollton (1½ miles northeast of)	do	do	178	.10	3.3	12.1	17.3	6	52
4496	Stella	do	do	181	.27	(1)	(1)	18.3	22	7
4510	Kalama	do	do	175	.20	3.3	12.2	16.7	10	68
4520	do	do	do	175	.14	3.3	12.0	15.4	10	62
4549	Stella	do	do	181	.23	2.8	14.1	17.2	16	17
4559	Ladu	do	do	184	.11	1.9	20.6	18.0	22	68
4564	Kelso	do	do	181	.12	3.8	10.4	18.0	10	148
4452	Kelso (1 mile south of)	do	Altered basalt	175	.83	3.9	10.1	14.3	7	500+
4553	Kahlotus	Franklin	Basalt	178	.16	2.9	14.0	17.6	16	9
4429	Danville (½ mile southwest of)	Ferry	Altered andesite	165	1.66	2.9	13.8	18.5	17	39
4459	Keller	do	Altered hornblende andesite	168	.14	3.0	13.3	18.3	13	500+
4481	Curlew	do	Altered andesite	165	.64	3.1	12.9	17.9	18	140
4548	Republic	do	Andesite	165	.27	6.5	6.2	(1)	(1)	79
4433	Curlew	do	Limestone	172	.30	6.6	6.1	17.0	5	40
4509	Republic	do	Crystalline limestone	168	.14	8.9	4.5	14.3	4	13
4518	Curlew	do	Limestone	178	.34	6.3	6.4	(1)	(1)	19
4506	do	do	Biotite granite	168	.23	4.4	9.0	18.1	8	11
4542	Laurier	do	Granite	162	.29	5.3	7.5	18.5	4	6
4516	Danville	do	Serpentine	168	.32	6.7	6.0	(1)	(1)	500+

4537	Curlew	do	Augite diorite	175	.25	3.6	11.1	17.5	10	38
4779	Keller	do	Granodiorite	168	.35	3.9	10.2	17.9	12	11
4565	Republic	do	Vitreous basalt	159	.13	5.1	7.8	[1]	[1]	2
4473	Adrian	Grant	Basalt	181	.31	2.7	14.8	18.0	13	12
4480	Bacon	do	do	175	.52	2.7	14.8	18.1	17	111
4531	Coulee City	do	do	184	.30	2.1	18.7	18.3	21	7
4550	do	do	do	178	.20	2.1	19.4	18.5	22	50
4555	Ephrata	do	do	184	.14	2.5	16.3	[1]	[1]	32
4466	Duckabush	Jefferson	Altered basalt	181	.34	4.5	8.9	12.0	6	500+
4498	Quilcene	do	do	181	.15	3.4	11.9	18.0	21	121
4556	Brinnon	do	Basalt	181	.17	2.9	13.9	[1]	[1]	500+
4569	Port Ludlow	do	Altered basalt	178	.29	3.8	10.6	[1]	[1]	20
476	Seattle	King	Quartzite	168	.58	2.2	18.2	[1]	[1]	[1]
477	do	do	Basalt	184	1.80	2.0	19.8	[1]	[1]	500+
2140	do	do	do	159	4.56	3.5	11.6	16.4	13	200
2142	Franklin	do	Altered basalt	168	3.04	3.7	10.7	16.6	9	500+
2207	Seattle (near)	do	Basalt	159	5.45	3.0	13.4	15.8	14	500+
4773	Quarry	do	Altered basalt	165	.36	2.8	14.2	16.8	18	72
6581	Enumclaw	do	do	168	1.73	5.0	8.1	8.8	9	500+
508	Seattle	do	Chlorite schist	168	1.04	3.6	11.0	[1]	[1]	232
4435	Earlington	do	Altered andesite	156	3.07	4.5	8.9	13.8	12	500+
4577	North Bend	do	do	172	.22	2.9	13.6	17.5	23	19
4479	Veazie	do	Diabase	172	.55	3.2	12.4	17.0	11	198
4563	Scenic	do	Granodiorite	172	.19	[1]	[1]	18.8	7	14
4783	Halford	do	do	168	.17	4.1	9.7	18.1	9	10
4578	Molson	do	Dolomitic marble	178	.25	[1]	[1]	16.3	5	11
2144	Port Orchard	Kitsap	Basalt	181	2.50	[1]	[1]	15.6	9	500+
4574	Charleston	do	Diabase	181	.15	3.3	12.2	17.3	16	82
4768	Kiona	Kittitas	Basalt	181	.30	2.1	19.0	18.8	20	35
4771	Indio	do	do	175	.64	2.1	18.9	18.0	23	2
4776	Prosser	do	do	178	.17	2.2	18.2	18.4	11	40
4780	Konntze	do	do	178	.42	2.3	17.4	18.4	27	3
4790	Roza	do	do	178	.80	1.7	24.1	17.7	32	3
4772	Easton	do	Altered syenite	159	1.28	1.6	25.6	[1]	[1]	10
4434	Lyle	Klickitat	Basalt	175	.43	3.4	11.8	17.2	13	42
4484	do	do	do	184	.12	[1]	[1]	17.7	19	44
4490	White Salmon	do	do	175	.29	2.6	15.4	18.7	40	13
4504	Cliffs	do	Olivine basalt	184	.12	2.6	15.6	18.0	18	15
2143	Chehalis	Lewis	Basalt	178	1.78	2.8	14.4	17.9	14	112
4789	Meskill	do	do	178	.27	2.3	17.5	15.3	17	14
4425	Govan	Lincoln	do	181	.73	2.1	19.4	18.9	21	21
4430	Almira	do	do	181	.61	1.9	20.8	18.2	20	21
4443	Sprague	do	do	184	.20	2.2	17.9	17.0	20	21
4457	Davenport	do	do	181	.45	3.1	13.1	18.3	20	28
4528	do	do	do	178	.35	3.2	12.7	13.3	8	14
4538	Wilbur	do	do	175	1.09	3.4	11.8	[1]	[1]	29
4576	Almira	do	do	181	.48	2.9	14.0	18.2	24	37
4579	Wilbur	do	do	181	.79	1.7	23.0	18.3	20	18
4483	Lilliwauh	Mason	Andesite breccia	156	2.62	4.1	9.8	13.1	9	500+
4507	Hamahama	do	Altered basalt	178	.67	4.2	9.4	13.8	7	500+
4486	Oroville	Okanogan	Marble	175	.50	8.3	4.8	[1]	[1]	18

[1] Test not made.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Pico, and Cuba, complete to January 1, 1916*—Contd.

WASHINGTON—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
4502	Oroville	Okanogan	Altered hornblende andesite	165	.88	2.5	16.2	19.1	18	23
4527	Nighthawk	do	Diorite	184	.24	4.0	10.0	(1)	(1)	24
4073	South Bend	Pacific	Basaltic andesite	162	4.90	5.9	6.7	15.4	11	500+
4417	(2)	do	Altered basalt	175	1.29	4.3	9.3	13.2	15	500+
4431	South Bend	do	Basalt	181	.57	2.9	13.6	16.6	6	252
4525	do	do	Altered basalt	178	.35	4.0	9.9	13.7	8	177
4511	Holcomb	do	Basalt tuff	143	4.87	4.1	9.8	5.7	6	500+
4543	South Bend	do	Basalt	175	1.68	3.7	10.8	17.5	10	2
4546	do	do	do	178	.65	3.9	10.3	13.7	8	145
4784	Ilwaco	do	Altered basalt	150	.83	4.8	8.3	12.3	10	72
4793	do	do	Basalt	159	2.13	5.1	7.9	11.0	10	141
4497	Raymond	do	Micaceous sandstone	159	2.40	4.9	8.2	4.4	6	39
2123	Takoma	Pierce	Altered diabase	172	1.70	4.0	10.1	17.7	19	96
4439	Elbe	do	Augite andesite	165	.36	4.1	9.8	18.4	9	26
4469	La Grande	do	Altered andesite	168	.11	2.2	18.2	19.2	35	20
4534	Elbe	do	Basaltic andesite	165	.18	6.6	6.0	(1)	(1)	27
4575	Ohap	do	Altered andesite	153	.36	3.7	10.8	17.7	18	33
6619	Electron	do	Diorite	168	.76	2.3	17.4	18.5	20	164
4426	Richardson	San Juan	Altered andesite	181	.27	2.5	16.0	18.3	24	102
4505	Olga	do	do	184	.07	4.2	9.5	17.3	19	48
4470	Friday Harbor	do	Limestone	172	.17	2.8	14.3	18.0	19	141
4568	Waldron Island	do	Feldspathic sandstone	162	.66	3.1	12.9	13.2	8	21
2141	Deception Pass	Skagit	do	168	.81	2.5	15.9	18.5	13	73
4438	Clear Lake	do	Altered diabase	184	.15	2.1	18.9	18.0	20	37
4460	Grassmere	do	do	184	.22	3.4	11.9	19.3	20	27
4471	Rockport	do	Altered andesite	184	.11	10.6	3.8	16.5	18	26
4782	Berlington	do	Slate	172	.21	(1)	(1)	11.3	6	12
4787	do	do	Altered basalt	187	.02	2.9	13.9	18.7	30	11
4474	Cooks	Skamania	Basalt	175	.98	2.3	17.4	18.2	33	176
8332	Willard	do	Olivine basalt	168	.91	7.7	5.2	(1)	(1)	8
2145	Whidleys Island	Snohomish	Sandstone	172	2.53	(1)	(1)	9.5	7	500+
3188	Everett	do	Altered peridotite	172	1.02	5.3	7.6	13.3	9	61
3189	do	do	Altered gabbro	172	.76	5.2	7.7	16.2	10	88
3190	do	do	do	178	.89	3.6	11.0	17.2	13	60
4458	Granite Falls	do	Altered diorite	168	.42	2.7	14.6	18.7	17	17
4499	do	do	Diorite	168	.43	3.2	12.7	18.3	17	16
4778	Index	do	Granodiorite	168	.23	3.1	12.9	17.6	9	13
4464	Monte Cristo	do	Altered andesite	172	.12	2.3	17.7	18.3	12	22
4794	Monroe	do	do	165	.74	4.3	9.3	15.0	8	72
4485	Granite Falls	do	Serpentine	165	.39	8.0	5.0	(1)	(1)	179

4445	Marshall	Spokane	Basalt	178	.62	2.2	17.9	18.5	30	8
4465	Highland	do	do	175	.90	3.0	13.4	17.9	(1)	4
4492	Marshall	do	do	175	.53	(1)	(1)	19.0	24	4
4495	Spokane	do	do	184	.63	(1)	(1)	17.2	13	9
4526	Medical Lake	do	do	184	.19	3.0	13.3	(1)	(1)	5
4536	Marshall	do	do	181	.30	(1)	(1)	18.0	12	16
4544	Cheney	do	Altered basalt	181	.20	(1)	(1)	17.7	10	500+
4545	Hillyard	do	Basalt	168	1.22	2.5	15.8	18.8	24	15
4446	do	do	Biotite granite	168	.29	4.0	10.1	18.8	7	24
4447	Milan	do	Altered granite porphyry	168	.61	3.2	12.4	(1)	(1)	47
4487	Morse	do	Biotite granite	168	.31	13.8	2.9	(1)	(1)	66
4513	Medical Lake	do	do	165	.28	4.3	9.3	18.3	8	10
4521	do	do	do	168	.29	3.0	13.5	18.3	11	13
4567	Colbert	do	do	162	.59	10.4	3.9	18.3	8	22
4427	Bossburg	Stevens	Feldspathic sandstone	140	5.42	7.6	5.3	13.1	9	97
4463	Newport	do	Micaceous sandstone	168	.75	3.0	13.3	18.3	(1)	9
4441	do	do	Altered granite porphyry	165	.83	2.0	20.4	18.7	19	25
4453	Elk	do	Altered granite	165	.26	4.2	9.5	18.7	8	95
4461	Ruby	do	Biotite granite	168	.29	3.4	11.9	18.8	6	15
4467	Scotia	do	Hornblende granite	168	.53	6.1	6.5	18.0	8	21
4519	Arden	do	Biotite granite	168	.38	5.3	7.5	18.1	4	11
4557	Addy	do	Altered granite porphyry	168	.20	3.0	13.5	18.7	18	28
4570	Scotia	do	Granite	165	.26	6.2	6.4	19.0	7	10
4448	Bossburg	do	Marble	165	.39	5.4	7.4	12.0	6	52
4449	Evans	do	do	168	2.19	5.4	7.4	14.7	3	16
4462	Barstow	do	Dolomitic marble	175	.68	5.6	7.2	17.1	7	19
4540	Williams	do	Marble	172	.31	4.8	8.3	12.0	5	15
4541	Chemelah	do	Dolomitic marble	178	.34	4.2	9.5	14.8	11	36
4572	Springdale	do	Siliceous dolomite	175	.22	3.8	10.5	(1)	(1)	9
4785	Northport	do	Marble	168	.12	4.9	8.2	12.4	6	10
4450	Kettle Falls	do	Altered diabase	172	.45	2.9	13.6	16.1	12	38
4475	Addy	do	Quartzite	165	.09	2.8	14.3	(1)	(1)	2
4522	Myers Falls	do	Calcareous quartzite	165	.29	4.0	10.1	(1)	(1)	19
4476	Valley	do	Basalt	175	.58	2.6	15.4	17.3	12	2
4477	Wayside	do	do	175	.23	1.5	26.7	18.2	35	2
4532	Dart	do	do	175	.65	2.0	20.4	17.7	19	2
4535	Springdale	do	do	175	.77	2.4	17.0	(1)	(1)	7
4482	Wolfred	do	Altered rhyolite	168	.51	2.6	15.4	18.7	6	23
4493	Leon Lake	do	Granodiorite	168	.38	3.9	10.2	18.7	8	14
4523	Camden	do	do	172	.26	5.0	8.0	18.2	8	21
4533	Valley	do	do	172	.45	12.0	3.3	(1)	(1)	10
4501	Blue Creek	do	Serpentine	159	.03	8.8	4.5	(1)	(1)	35
4515	Myers Falls	do	Volcanic ash	172	.11	2.8	14.3	16.9	23	22
4571	Blue Creek	do	Altered gabbro	190	.12	2.7	14.8	18.3	17	13
4455	Marcus	do	Chlorite epidote schist	175	.38	5.6	7.1	(1)	(1)	106
4437	Tumwater	Thurston	Olivine basalt	184	.20	2.3	17.5	17.7	20	30
4517	Gate	do	Altered basalt	175	.57	4.1	9.7	11.2	7	500+
4554	Oakville	do	Basalt	181	.11	3.6	11.1	11.0	5	500+
4573	Olympia	do	do	190	.10	2.5	15.9	18.7	14	33
4547	Gate	do	Altered gabbro	172	.15	5.9	6.8	13.3	8	33
4508	Cathlamet	Wahkiakum	Basalt	168	.47	2.9	13.8	17.4	9	44

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

WASHINGTON—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
4514	Skamokawa	Wahkiakum	Basalt	175	.41	2.2	17.9	18.4	23	12
4530	Cathlamet	do	do	181	.22	1.9	21.3	17.7	24	13
4552	do	do	do	175	.30	3.1	13.0	17.8	11	10
4472	Touchet	Walla Walla	do	172	.42	3.2	12.5	18.0	6	111
4500	Dixie	do	do	181	.39	2.7	14.7	17.2	6	25
1023	Saar Creek	Whatcom	Altered diabase	168	.53	3.2	12.8	17.6	17	208
1024	Coal Creek	do	do	190	2.73	4.9	8.2	12.8	4	75
1028	Bellingham	do	Feldspathic quartzite	175	.19	2.5	16.0	18.2	23	200
4770	Deming	do	Feldspathic sandstone	153	2.81	8.2	4.9	8.3	5	153
4777	Clinkamft	do	do	156	2.03	8.3	4.8	(1)	(1)	20
4781	Wickersham	do	do	162	.93	15.9	2.5	9.2	5	97
4774	do	do	Sericite schist	168	.47	23.3	1.7	(1)	(1)	7
4775	Kendall	do	Marble	172	.20	4.9	8.2	12.3	7	22
1272	Colfax	Whitman	Basalt	181	1.11	2.0	20.0	17.8	22	9
1735	Pullman	do	do	184	.92	2.5	16.3	17.7	10	16
4456	Winona	do	do	181	.15	2.5	16.2	19.0	25	31
4491	Rosalia	do	do	175	.29	2.7	14.7	17.6	26	11
4503	Pullman	do	Altered basalt	181	.15	2.3	17.2	(1)	(1)	13
4529	Palouse	do	Basalt	184	.11	2.3	17.7	18.2	22	32
4494	Steptoe Butte	do	Quartzite	165	.40	5.2	7.7	18.7	9	3
4428	North Yakima	Yakima	Basalt	181	.34	2.5	16.3	18.0	19	13
4512	do	do	do	181	.08	3.0	13.2	17.5	16	7
4582	(2)	(2)	Basalt	178	.27	2.2	17.9	(1)	(1)	21
4583	(2)	(2)	do	172	.35	2.2	18.2	17.7	22	7
4584	(2)	(2)	do	181	.26	3.6	11.1	16.8	14	120
4585	(2)	(2)	do	181	.24	2.5	16.0	18.5	25	13
4788	(2)	(2)	do	175	.07	2.7	14.6	17.7	25	3
4786	(2)	(2)	Granodiorite	175	.09	3.5	11.6	17.8	11	7
4791	(2)	(2)	Altered andesite	178	.20	3.9	10.3	17.2	21	9
4792	(2)	(2)	Augite andesite	175	.11	2.0	20.2	19.2	38	13

WEST VIRGINIA.

3030	Philippi	Barbour	Sandstone	156	1.41	6.6	6.0	16.1	8	12
3073	Nicklow	do	do	159	.84	4.2	9.4	18.8	9	3
3106	Phillippi	do	do	156	3.38	4.8	8.3	6.4	5	68
3108	do	do	Limestone	172	1.34	3.6	11.0	16.8	17	41
2488	Martinsburg	Berkeley	do	168	.26	4.8	8.3	16.7	4	52

2606	do	do	do	168	.11	4.1	9.8	15.7	8	62
2607	do	do	do	168	.20	4.2	9.6	16.4	4	50
3074	do	do	do	172	.12	3.5	11.4	16.4	10	24
5365	Berkeley	do	do	168	.21	4.6	8.6	16.0	7	46
5893	Martinsburg	do	Siliceous limestone	168	.33	3.5	11.4	15.8	10	31
8154	do	do	Argillaceous limestone	178	.17	2.8	14.3	17.2	17	61
8153	do	do	do	168	.35	4.1	9.8	15.7	3	50
8504	do	do	Limestone	168	.70	5.4	7.4	13.7	6	93
8586	[2]	do	Siliceous dolomite	178	.37	3.6	11.2	17.2	17	51
7369	Martinsburg	do	Dolomite	178	.26	2.5	15.9	17.3	13	39
3105	Peytona	Boone	Sandstone	159	1.99	3.4	11.8	16.8	12	70
3102	Gassoway	Braxton	do	156	4.65	3.5	11.6	12.7	10	42
4645	Sutton	do	Feldspathic sandstone	156	3.07	17.9	2.2	17.8	5	18
3107	Wellsburg	Brooke	Limestone	168	.56	3.1	12.7	[1]	[1]	40
1777	Huntington	Cabell	Sandstone	162	2.32	9.5	4.2	0.0	6	23
2417	do	do	Feldspathic sandstone	159	3.43	7.4	5.4	14.7	6	65
2418	do	do	Calcareous sandstone	162	1.41	4.9	8.2	15.7	7	30
2485	do	do	Weathered sandstone	156	3.18	28.4	1.4	12.2	2	77
3021	do	do	do	147	2.60	41.7	1.0	[1]	[1]	62
3029	do	do	Calcareous sandstone	165	.99	3.3	12.1	14.2	6	28
1884	do	do	Dolomitic limestone	165	1.40	4.4	9.2	15.2	8	67
1885	do	do	Limestone	165	1.14	5.4	7.4	11.0	9	243
3034	Big Bend	Calhoun	Calcareous sandstone	165	1.48	[1]	[1]	16.7	9	78
3003	[2]	Doddridge	Sandstone	156	3.25	13.5	3.0	11.3	5	80
3022	Avlon	Greenbrier	Cherty limestone	168	.41	7.1	5.6	[1]	[1]	22
3069	Organ Cave	do	Limestone	168	.26	4.1	9.8	15.8	8	31
5917	Renick	do	Crystalline limestone	168	.16	3.7	10.7	16.8	8	45
5918	Frazier	do	Limestone	172	.26	3.7	10.8	[1]	[1]	38
5919	Snowflake	do	do	168	1.03	5.5	7.3	[1]	[1]	14
3026	Avlon	do	Sandstone	159	1.09	2.5	15.7	18.0	6	10
3427	Ridgley	Hampshire	Limestone	168	.32	3.5	11.4	16.8	9	54
3428	do	do	do	168	.39	3.5	11.4	16.3	10	63
7417	Green Spring	do	Siliceous limestone	165	.25	2.1	19.0	17.9	10	68
7418	Green Spring (1½ miles west of)	do	Quartzite	159	.75	3.5	11.5	19.5	13	4
3027	Lost Creek	Harrison	Sandstone	153	5.22	6.8	5.8	9.5	4	69
5948	Clarksburg	do	Argillaceous limestone	172	.87	3.5	11.4	16.5	16	85
3000	Union District	Jackson	Sandstone	156	3.54	9.6	4.2	4.5	4	49
3031	Ripley (near)	do	do	156	3.60	5.0	8.0	6.4	7	29
3103	Silverton	do	do	156	4.02	6.3	6.4	8.0	4	36
2489	Engles	Jefferson	Limestone	168	.30	4.5	9.0	11.8	4	41
2490	Kearneysville	do	do	172	.63	4.2	9.6	14.7	5	68
2579	Millville	do	Dolomitic limestone	175	.74	4.4	9.1	14.3	7	24
2589	Kearneysville	do	Limestone	168	.22	3.9	10.2	14.3	6	29
3025	Middleway	do	do	168	.72	4.0	10.1	15.8	10	26
3032	Summit	do	Dolomitic limestone	175	.32	2.9	13.8	17.5	22	35
5741	Charlestown	do	Limestone	168	.19	4.1	9.7	16.8	7	94
2634	Millville	do	Dolomite	178	.29	3.7	10.9	16.6	6	28
2965	St. Albans	Kanawha	Limestone	168	.54	4.9	8.2	16.4	4	31
2969	Kendalia	do	Feldspathic sandstone	159	3.37	6.6	6.1	15.8	6	50
3070	Tornado	do	Sandstone	156	3.94	8.8	4.6	0.0	4	56

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

WEST VIRGINIA—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
3072	(1)	Kanawha	Sandstone	159	2.52	11.0	3.6	14.6	4	34
6109	Spring Hill	do	do	159	1.96	14.6	2.7	12.1	4	25
3023	Blakeley	do	Siliceous slate	162	.88	4.8	8.3	19.7	30	19
3104	Weston	Lewis	Sandstone	165	2.30	4.1	9.8	9.9	7	51
3238	Camden	do	Limestone	168	1.40	(2)	(2)	16.7	15	32
2972	Chapmensville	Logan	Feldspathic sandstone	159	2.56	6.4	6.3	13.2	5	40
3237	Kitchen	do	Sandstone	159	2.83	2.6	15.2	8.3	8	52
4760	Fairmont	Marion	Argillaceous sandstone	165	2.44	4.5	8.9	12.0	14	39
7833	do	do	Ferruginous sandstone	156	2.39	4.8	8.3	5.4	8	44
7493	do	do	Argillaceous limestone	(2)	(2)	3.4	11.8	17.5	10	49
7494	do	do	Feldspathic limestone	(2)	(2)	7.8	5.1	11.8	5	59
7785	do	do	Argillaceous limestone	168	.47	4.3	9.3	16.8	7	26
7834	do	do	do	168	.50	3.9	10.3	17.2	11	24
8854	do	do	do	171	.29	3.4	11.8	16.2	9	22
2967	Union District	Mason	Feldspathic sandstone	153	4.52	8.3	4.8	0.0	5	70
2976	Point Pleasant	do	do	150	5.30	(2)	(2)	0.0	6	77
2088	North Fork	McDowell	do	165	.82	3.0	13.5	15.5	8	72
2974	Elkhorn	do	Ferruginous sandstone	156	2.37	4.3	9.4	14.9	10	149
2997	Berwind	do	Sandstone	162	2.16	4.2	9.4	16.8	9	98
3066	Gary	do	Feldspathic sandstone	162	1.61	3.3	12.2	16.0	8	208
4622	Welch	do	do	165	3.53	4.2	9.6	15.0	8	61
2095	Bluefield	Mercer	Limestone	165	1.60	4.3	9.2	(2)	(2)	108
2970	do	do	do	168	.51	3.3	12.0	16.8	11	58
7740	Princeton (near)	do	Argillaceous limestone	168	.19	7.3	5.5	(2)	(2)	75
7735	do	do	Feldspathic sandstone	162	1.35	(2)	(2)	13.2	7	45
7764	do	do	Calcareous sandstone	168	.38	5.8	6.9	13.4	15	76
8746	do	do	do	165	1.21	3.7	11.1	17.0	11	22
2472	Keyser	Mineral	Limestone	168	.35	4.0	10.0	16.2	7	43
3350	Patterson Creek Station	do	do	168	.22	4.1	9.8	18.8	13	40
3351	do	do	do	165	.19	2.3	17.1	18.8	23	81
767	Morgantown	Monongalia	do	168	.50	5.6	7.1	(2)	(2)	37
3065	Randall	do	do	168	1.33	3.6	11.2	17.2	12	21
3071	Morgantown	do	do	168	.46	4.7	8.6	17.1	11	29
5610	Sturgisson	do	Siliceous limestone	168	.23	4.9	8.2	16.1	10	76
5612	do	do	Limestone	168	.55	4.4	9.1	16.0	6	32
5613	do	do	Argillaceous limestone	168	.74	4.3	9.3	14.2	4	16
5615	do	do	Impure limestone	168	.48	4.3	9.4	16.0	10	32
5616	do	do	Argillaceous limestone	168	.37	3.8	10.5	15.9	10	30
2513	Opekiska	do	Feldspathic sandstone	156	3.74	6.9	5.8	14.7	5	36
2514	Morgantown	do	Ferruginous sandstone	150	2.51	11.2	3.6	15.2	5	11
3024	Smithtown	do	do	134	4.04	6.1	6.6	(2)	(2)	46
3033	Daybrooke	do	do	153	3.61	(2)	(2)	14.0	9	24

5614	Sturgisson	do	Calcareous sandstone	168	.29	2.9	13.8	16.8	11	40
3001	Great Cacapon	Morgan	Dolomite	172	.91	3.2	12.3	14.8	19	71
5377	Berkeley Springs	do	Limestone	168	.45	5.1	7.9	12.2	6	42
9560	Berkeley Springs (near)	do	do	168	.51	7.1	5.6	15.8	4	71
9563	do	do	do	168	.36	6.5	6.2	[2]	[2]	62
9559	Sir John Reed (near)	do	Sandstone	165	.61	3.0	13.3	18.8	12	13
9561	Berkeley Springs (near)	do	do	162	.94	5.1	7.8	19.0	10	18
9562	Great Cacapon (near)	do	do	162	1.69	8.0	5.0	18.3	8	23
9564	Berkeley Springs (near)	do	Ferruginous sandstone	168	.99	4.0	10.0	16.3	11	26
1668	Valley Grove (near)	Ohio	Limestone	165	1.78	4.2	9.5	17.2	11	24
1669	Elm Grove	do	do	165	1.48	4.8	8.4	[2]	7	21
1670	Elm Grove (near)	do	do	168	.96	4.3	9.2	19.1	7	15
1672	Elm Grove	do	do	168	1.30	3.5	11.6	18.0	15	20
6137	Wheeling	do	do	165	.95	4.2	9.4	15.7	12	69
1671	Patterson	do	Dolomite	165	2.86	4.0	10.1	17.4	12	108
6925	Marlington	Pocahontas	Limestone	172	.06	3.6	11.1	16.0	13	28
2511	Buckhorn	Preston	Dolomitic limestone	165	.34	2.2	18.2	18.0	14	47
2697	Rowlesburg	do	Limestone	168	1.14	8.4	4.8	[2]	[2]	33
3492	[1]	do	Argillaceous limestone	168	.16	4.9	8.2	14.2	9	24
2891	Red House	Putman	Sandstone	153	3.90	11.8	3.4	3.5	3	76
4796	[1]	Raleigh	do	162	.36	3.2	12.5	17.3	10	8
3002	Alpena	Randolph	Limestone	168	.29	3.9	10.2	16.6	10	41
3005	Silica	do	Sandstone	162	.63	[2]	[2]	18.5	10	9
3067	Kingsville	do	Ferruginous sandstone	150	3.46	16.3	2.5	11.8	3	500+
8941	Cornwallis	Ritchie	Feldspathic sandstone	159	2.10	[2]	[2]	0.0	2	2
3068	Talcot	Summers	Sandstone	162	1.28	2.3	17.1	17.8	13	28
2966	Grafton	Taylor	Feldspathic sandstone	156	3.45	6.4	6.2	13.7	6	61
2998	Sand Run	Upshur	Sandstone	156	1.46	7.2	5.5	18.1	7	17
2999	Newlonton	do	do	153	1.80	19.3	2.1	10.1	4	7
3028	Adrian	do	do	156	2.89	14.1	2.8	17.3	3	55
3236	[1]	do	Limestone	168	.56	3.7	10.7	16.9	10	30
2975	Webster Springs	Webster	do	168	.41	[2]	[2]	16.5	9	94
3064	Uniontown	Wetzel	Sandstone	150	2.85	28.2	1.4	8.3	3	30
3075	do	do	do	156	2.73	[2]	[2]	3.3	3	41
7830	Williamson	Wingo	Feldspathic sandstone	162	2.47	5.3	7.5	7.0	6	45
4871	Palestine	Wirt	do	156	2.93	8.5	4.7	0.0	5	14
4872	do	do	do	156	2.39	16.3	2.5	7.7	4	16
2968	Parkersburg	Wood	do	156	4.32	7.7	5.2	0.0	6	68
8447	do	do	do	162	3.32	[2]	[2]	12.6	5	[2]
8876	Engle	[1]	Argillaceous limestone	168	.24	6.8	5.9	14.5	3	23
2971	Maben	Wyoming	Sandstone	162	.61	2.5	16.3	18.9	11	10
2973	Bakers Ridge district	do	Feldspathic sandstone	162	1.58	3.2	12.7	17.0	11	500+

WISCONSIN.

6452	Greenleaf	Brown	Dolomite	172	2.30	3.0	13.3	14.8	8	58
6504	Brillion	Calumet	do	165	1.35	7.5	5.3	12.2	5	61
6161	Columbus	Columbia	Argillaceous dolomite	165	2.75	5.7	7.0	12.7	3	29
5788	Bridgeport	Crawford	Siliceous dolomite	162	3.10	8.9	4.5	9.8	5	42

[1] Exact locality not known.

[2] Test not made.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

WISCONSIN—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
6209	Soldiers Grove	Crawford	Dolomite	162	2.96	8.4	4.8	11.3	4	24
6216	Prairie du Chien	do	do	165	2.65	7.0	5.7	5.8	4	16
6223	Bridgeport	do	do	175	.65	(1)	(1)	12.7	8	20
746	Madison	Dane	Rhyolite	165	.09	2.4	17.0	(1)	(1)	(1)
1009	do	do	Dolomite	165	2.70	9.0	4.4	14.0	7	174
5362	(2)	do	Argillaceous limestone	168	2.30	4.3	9.4	14.7	8	20
6062	(2)	do	Dolomite	175	1.21	8.9	4.5	14.0	10	34
6202	Hamilton	do	do	162	1.67	3.6	11.1	(1)	(1)	19
6063	(2)	do	Siliceous dolomite	172	1.57	6.1	6.6	11.3	6	19
6228	Middletown	do	Oolitic dolomite	172	1.90	5.1	7.9	15.7	10	14
6438	Madison	do	Argillaceous dolomite	162	2.09	10.8	3.7	12.5	4	94
1397	Portland	Dodge	Quartzite	168	.14	2.8	14.2	19.0	19	5
5790	Richwood	do	Argillaceous dolomite	172	1.53	4.4	9.1	16.1	11	34
6500	Hubard	do	Dolomite	172	1.10	4.5	9.0	14.3	8	53
5046	Sturgeon	Door	do	178	.26	4.5	9.0	14.2	12	6
6244	Kewaunee	do	Dolomitic marble	178	.22	3.8	10.6	12.8	6	53
5795	Commonwealth	Florence	Ferruginous slate	168	3.41	17.1	2.3	(1)	(1)	89
5523	Peebles	Fon du Lac	Dolomite	178	.51	5.4	7.5	13.7	8	35
6203	Marblehead	do	do	175	.51	3.4	11.9	14.4	7	18
6479	do	do	do	175	.36	4.6	8.7	15.2	10	52
6752	do	do	do	178	.30	3.7	10.8	13.8	7	27
6807	Hamilton	do	do	175	1.01	5.2	7.6	13.4	6	49
6210	Benton	Grant	do	168	2.16	12.9	3.1	12.8	4	16
6230	Cassville	do	do	168	1.43	9.6	4.2	12.3	4	39
6222	Hazel Green	do	Siliceous dolomite	165	1.88	7.1	5.6	15.2	5	18
6212	Lancaster	do	Limestone	162	1.67	4.1	9.7	14.8	8	21
6208	Platteville	do	Dolomite	172	1.57	7.4	5.4	15.0	5	15
6215	Monroe	Greene	Argillaceous dolomite	172	1.68	22.5	1.8	(1)	(1)	18
6221	Broadhead	do	do	162	4.97	8.8	4.5	9.3	3	41
6225	Martintown	do	Siliceous dolomite	162	3.33	11.4	3.5	16.2	5	33
6227	Broadhead	do	Dolomite	162	4.72	11.1	3.6	14.1	4	27
747	Utley	Greene Lake	do	172	.87	4.1	9.8	(1)	(1)	8
667	Berlin	do	Rhyolite	165	.05	1.8	22.5	(1)	(1)	15
668	do	do	do	165	.03	4.0	10.0	(1)	(1)	10
695	Utley	do	do	165	.04	5.0	8.0	(1)	(1)	(1)
696	do	do	do	165	.06	5.6	7.2	(1)	(1)	35
1427	Berlin	do	do	165	.10	1.9	20.6	19.0	23	5
1434	Utley	do	do	162	.05	2.5	16.2	18.9	19	17
6207	Blue Mound	Iowa	Argillaceous dolomite	162	4.75	11.3	3.6	10.7	4	9
6213	Mineral Point	do	Limestone	168	.59	5.2	7.7	15.7	6	21
6211	do	do	do	165	2.96	3.9	10.3	14.5	11	16

6224	Blue Mound	do	Chert	150	3.16	3.3	12.3	(1)	(1) 5
6160	Fort Atkinson	Jefferson	Dolomite	172	1.68	8.6	4.7	12.8	5 17
2953	La Crosse	La Crosse	Chert	162	.58	(1)	(1)	19.7	26 4
2954	do	do	Dolomite	172	.89	(1)	(1)	15.0	9 34
2956	do	do	do	175	.98	(1)	(1)	14.8	7 36
2955	do	do	Limestone	172	1.11	(1)	(1)	17.3	6 26
2957	do	do	Biotite granite	165	.19	(1)	(1)	18.8	17 24
6257	Darlington	Lafayette	Siliceous dolomite	168	1.87	5.5	7.3	14.5	5 40
6569	Quarry Post Office	Manitowoc	Dolomite	175	.51	5.5	7.2	11.1	6 145
9674	Cooperstown	do	do	175	.33	5.2	7.7	13.7	7 37
3448	Amberg	Marinette	Biotite granite	165	.25	2.4	16.5	18.8	13 13
1442	Montello	Marquette	Granite	165	.15	2.1	18.9	(1)	(1) 11
1124	Granville	Milwaukee	Dolomite	175	.50	5.7	7.0	16.8	4 26
1285	North Milwaukee	do	do	159	3.92	3.9	10.2	8.2	6 21
1284	Granville	do	do	174	.59	4.6	8.5	15.2	9 27
1283	Wanwatosa	do	do	165	2.90	3.2	12.2	13.4	8 15
1282	(2)	do	do	162	2.47	8.5	4.7	13.4	8 22
4944	(2)	do	do	165	2.55	5.4	7.4	13.5	10 27
6248	Kankanna	Outaganie	do	175	1.03	4.1	9.7	(1)	(1) (1)
3765	Belgium	Ozaukee	do	175	.60	5.4	7.4	15.6	9 18
4718	do	do	do	175	.65	5.3	7.5	14.2	8 9
6280	Grafton	do	do	165	1.38	6.3	6.3	11.1	5 32
6219	Prescott	Pierce	do	175	1.06	5.4	7.4	15.2	7 17
7395	Dresser Junction	Polk	Altered basalt	184	.22	2.2	18.2	18.8	19 71
8288	do	do	Altered diabase	184	.84	1.8	22.2	18.7	22 43
5840	Stephens Point	Portage	Sandstone	159	.77	3.6	11.0	18.8	13 4
5829	do	do	do	156	.59	5.2	7.7	18.5	12 6
5799	Ives post office	Racine	Dolomite	168	.46	5.2	7.6	13.7	7 27
6503	Racine	do	do	162	1.20	5.6	7.2	(1)	(1) 53
7549	Ives	do	do	165	.59	7.1	5.7	11.0	6 34
7548	do	do	do	165	.73	6.9	5.8	14.0	8 51
7743	do	do	do	165	.72	6.0	6.7	13.8	8 47
8039	(2)	do	do	168	.46	6.9	5.8	14.9	7 12
2202	Clinton	Rock	Dolomitic limestone	175	1.95	5.8	6.8	14.0	7 72
2201	do	do	do	165	2.99	8.4	4.8	11.3	4 44
2200	do	do	do	172	1.77	7.4	5.4	12.5	5 48
6214	Beloit	do	Argillaceous dolomite	165	3.76	8.9	4.5	14.2	5 14
6217	do	do	do	159	5.89	8.6	4.7	15.3	7 17
6218	Zanesville	do	do	172	.14	4.3	9.3	14.5	6 14
6226	Beloit	do	Siliceous dolomite	168	2.36	8.1	4.9	10.5	5 17
6220	Zanesville	do	Dolomite	168	2.24	2.3	17.3	15.0	8 23
6229	Beloit	do	do	168	2.83	8.1	4.4	9.4	6 16
6535	Fulton	do	Argillaceous dolomite	168	2.35	5.6	7.1	12.0	7 42
1437	Ableman	Sauk	Quartzite	165	.13	3.4	11.9	18.0	(1) 7
6497	do	do	Sandstone	153	.81	10.7	3.7	15.7	3 4
6498	do	do	do	153	.82	3.4	11.7	18.4	9 4
8259	do	do	do	156	.88	2.7	14.8	19.0	10 5
6247	Sheboygan	Sheboygan	Dolomitic marble	172	.63	4.8	8.3	12.7	5 39
6249	do	do	Dolomite	172	.50	3.8	10.4	13.3	7 32
1145	Jackson	Washington	Dolomitic marble	175	.84	4.9	8.2	16.0	5 36
3491	do	do	Dolomite	162	3.39	6.2	6.5	12.3	4 (1)

[1] Test not made.

[2] Exact locality not known.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

WISCONSIN—Continued.

Serial No.	Town or city.	County.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
6159	Whitewater	Walworth	Dolomite	168	2.27	6.4	6.3	13.3	7	27
3509	Lannon	Waukesha	do	175	.91	3.4	11.7	15.9	13	24
3800	do	do	do	172	1.12	3.2	12.7	16.1	13	26
6170	Pewaukee	do	do	172	1.84	4.1	9.9	15.3	13	14
6171	Lannon	do	do	168	2.03	6.7	6.0	13.3	9	36
6172	Waukesha	do	do	172	1.56	3.6	11.0	15.0	7	20
6173	Lannon	do	do	175	.88	3.5	11.6	15.6	10	22
8656	do	do	do	175	.85	3.6	11.1	15.4	10	25
1408	Waupaca	Waupaca	Granite	162	1.96	1.4	27.8	18.9	29	6
3011	Waupaca (2 miles north of)	do	Biotite granite	168	.15	5.3	7.5	19.0	9	26
8018	Waupaca	do	do	168	.25	4.1	9.7	18.7	5	20
1574	Lohrville	Waushara	Granite	168	.26	2.0	20.0	19.0	(1)	6
1540	do	do	do	(1)	(1)	2.4	16.4	(1)	(1)	(1)
1435	Marion	do	do	165	.30	1.5	26.3	18.9	23	7
1432	Lohrville	do	do	165	.19	2.7	14.6	18.4	21	9
1431	Red Granite	do	do	165	.14	1.1	37.0	18.8	25	3
1398	Glen Rock	do	do	165	.42	1.5	27.4	19.2	24	6
5586	Red granite	do	do	(1)	(1)	(1)	(1)	19.0	14	(1)
6237	Oshkosh	Winnebago	Sandstone	175	.65	3.8	10.6	15.5	8	37
6236	Appleton	do	Dolomite	175	.53	3.4	11.8	16.5	10	45
6246	Oniro	do	do	172	1.65	5.6	7.1	16.3	7	32
6487	Poyan	do	do	175	.62	3.4	11.9	14.7	11	23
6573	Neenah	do	do	168	2.68	4.1	9.8	14.3	9	31
8920	Rudolph	Wood	Sandstone	156	1.10	3.4	11.8	18.7	5	2
5796	(2)	(2)	Ferruginous sandstone	140	4.51	25.2	1.6	0.0	3	20
6181	(2)	(2)	Argillaceous dolomite	168	1.86	10.7	3.7	11.7	7	9
6180	(2)	(2)	do	168	2.96	7.3	5.5	15.0	7	18
6179	(2)	(2)	do	153	6.90	7.3	5.5	12.7	5	19
6177	(2)	(2)	do	165	2.82	6.1	6.6	12.7	5	26
6176	(2)	(2)	do	165	3.59	7.6	5.3	4.0	3	13
6175	(2)	(2)	do	168	2.67	7.4	5.4	13.3	12	32
6185	(2)	(2)	do	168	2.99	5.4	7.4	13.2	6	13
6186	(2)	(2)	do	168	3.01	8.1	4.9	15.0	7	23
6183	(2)	(2)	Siliceous dolomite	162	3.68	9.9	4.1	4.5	2	22
6178	(2)	(2)	do	162	2.51	8.0	5.0	12.0	3	27
6174	(2)	(2)	Dolomite	172	1.35	5.6	7.1	15.5	11	25
6182	(2)	(2)	do	159	3.13	11.3	3.5	11.7	4	32
6184	(2)	(2)	do	175	.86	9.2	4.3	13.7	4	33
6231	(2)	(2)	do	162	3.44	6.1	6.5	14.5	4	20
5791	(2)	(2)	do	175	.83	3.6	11.0	14.0	10	24
6232	(2)	(2)	do	165	3.41	6.5	6.2	16.0	9	38

6233	(2)	(2)	Argillaceous limestone	165	.78	6.2	6.5	(1)	(1)	28
7624	(2)	(2)	Dolomite	168	.79	7.3	5.5	14.0	6	36
			WYOMING.							
6452	Sheridan	Sheridan	Ferruginous sandstone	150	7.55	14.4	2.8	5.0	9	3
2209	Fort McKenzie	do	Calcareous sandstone	168	1.49	2.7	15.0	15.3	10	97
2380	do	do	do	165	1.86	4.2	9.6	15.3	6	251
			CUBA.							
471	Cienfuegos	Cuba	Andesite	159	2.04	2.6	15.3	(1)	(1)	337
472	Campo Florida	do	Diorite	172	.66	3.4	11.7	(1)	(1)	137
575	Habana	do	do	168	.81	2.2	18.3	(1)	(1)	148
473	do	do	Marble	168	1.04	4.0	10.1	(1)	(1)	90
			PORTO RICO.							
795	Bayamon	Porto Rico	Limestone	165	0.60	5.3	7.5	(1)	(1)	49
798	Carolina	do	do	168	.49	5.2	7.7	15.3	7	27
799	Rio Piedras	do	do	162	.83	6.3	6.3	13.3	(1)	91
803	do	do	Basalt tuff	168	1.10	3.5	11.3	(1)	20	108
797	Arecido	do	Limestone	156	.87	7.4	5.4	(1)	(1)	48
801	Uttado	do	Diorite	168	.39	4.0	10.0	(1)	(1)	59
802	Manati	do	Limestone	165	.96	5.2	7.7	(1)	(1)	64
793	Rio Piedras	do	do	168	.20	5.8	6.9	14.1	7	30
794	Cayey	do	do	168	.08	5.1	7.9	14.6	10	61
796	Juncos	do	Diorite	175	.09	2.8	14.5	(1)	(1)	1
800	Comerio	do	Limestone	168	.11	6.0	6.7	10.0	6	135
804	Gurabo	do	Basalt breccia	187	.25	3.5	11.5	17.2	21	73
			CANADA.							
6660	Vernon	British Columbia [3]	Crystalline limestone	168	0.36	(1)	(1)	12.4	5	125
6728	do	do [3]	Vitreous basalt	165	.55	4.4	9.1	18.4	8	85
6729	do	do [3]	do	162	1.45	3.5	11.4	18.3	14	41
7661	Enderky	do [3]	Basalt breccia	153	4.87	5.9	6.8	18.3	8	500+
2213	Portlock Harbor	Ontario [3]	Slate	172	.57	3.0	13.2	16.9	10	19
7079	(2)	do [3]	do	172	.07	2.8	14.3	16.9	10	12
2510	Thessalon	do [3]	Feldspathic quartzite	165	.22	1.9	20.6	(1)	(1)	14
3819	Desbarats	do [3]	Altered diabase	178	.86	(1)	(1)	17.3	10	141
6136	Humbug Point	do [3]	do	181	.18	2.5	15.8	18.0	9	26
6300	Bruce Mines	do [3]	do	187	.17	2.2	18.2	18.5	18	66
6518	(2)	do [3]	do	184	.72	2.1	19.4	18.0	31	67
7069	(2)	do [3]	Altered quartz diabase	187	.09	2.3	17.4	18.6	17	23

[1] Test not made.

[2] Exact locality not known.

[3] Province.

TABLE V.—*Results of physical tests of road-building rock from the United States, Canada, Porto Rico, and Cuba, complete to January 1, 1916*—Contd.

CANADA—Continued.

Serial No.	Town or city.	Province.	Name of material.	Weight per cubic foot.	Absorption per cubic foot.	Per cent of wear.	French coefficient of wear.	Hardness.	Toughness.	Cementing value.
				Pounds.	*Pounds.*					
7387	Bruce Mines	Ontario	Altered diabase	178	0.70	2.6	15.4	17.3	15	109
7388	.....do	.....do	.....do	184	.25	2.5	16.3	18.7	20	155
7585	Hanelock	.....do	.....do	190	.08	2.2	18.2	18.7	16	22
4813	Cape Breton	.....do	Open hearth slag	196	1.68	3.1	12.9	(1)	(1)	500+
5367	Pole Island	.....do	Altered gabbro	175	.10	2.3	17.6	17.2	9	47
6889	Desbarats	.....do	.....do	175	.10	5.1	7.8	16.1	6	35
7188	.....do	.....do	.....do	184	.44	3.7	10.7	17.8	16	104
5831	Bruce Mines	.....do	Altered augite andesite	181	.34	2.1	18.7	17.9	22	29
7256	Belmont Township	.....do	Altered Andesite	187	.28	(1)	(1)	18.5	9	39
5933	Dundas	.....do	Dolomite	175	1.17	2.9	13.7	15.8	14	27
7268	Fergus	.....do	.....do	175	.40	(1)	(1)	13.8	5	48
7269	Owen Island	.....do	Argillaceous dolomite	165	2.25	(1)	(1)	14.8	3	39
7270	.....do	.....do	Siliceous dolomite	165	1.25	(1)	(1)	18.3	3	62
7671	(2)	.....do	Dolomite	175	.57	5.3	7.5	16.6	14	41
7672	(2)	.....do	.....do	172	.83	5.5	7.3	14.1	6	17
8163	Dundas	.....do	.....do	175	.35	3.9	10.0	15.8	13	36
8164	.....do	.....do	.....do	175	.57	3.7	10.9	16.2	9	46
8165	.....do	.....do	.....do	175	.24	3.6	11.1	16.0	11	61
8166	.....do	.....do	.....do	168	.66	3.8	10.5	13.5	10	19
8167	.....do	.....do	.....do	172	.52	3.8	10.5	15.8	6	26
7372	.....do	.....do	Argillaceous dolomite	168	1.95	3.0	13.4	12.8	8	50
6168	Copley Island	.....do	Feldspathic sandstone	168	.30	2.5	16.3	18.2	34	33
7251	Modoc Township	.....do	Altered diorite porphyry	190	.17	3.0	13.2	17.8	13	79
7252	Elzivir Township	.....do	Quartz diorite	190	.10	(1)	(1)	18.3	16	34
7253	Belmont Township	.....do	Hornblende epidote schist	187	.19	2.9	13.6	17.9	13	47
7254	.....do	.....do	Amphibolite	187	.31	(1)	(1)	18.3	24	87
7257	.....do	.....do	.....do	193	.11	(1)	(1)	18.6	17	57
7255	Elzivir Township	.....do	Hornblende gneiss	190	.19	(1)	(1)	17.6	9	48
7266	Collingwood	.....do	Argillaceous limestone	165	1.39	(1)	(1)	10.3	4	40
7283	(2)	.....do	Limestone	165	.93	(1)	(1)	18.8	12	119
8873	Hagersville	.....do	Siliceous limestone	175	.29	3.5	11.3	19.0	11	23
5725	Sherbrooke	Quebec	Siliceous dolomite	187	.31	3.6	11.2	17.7	14	22
7303	Dundas	Ontario	Dolomite	172	.61	(1)	(1)	15.8	10	19
7305	.....do	.....do	.....do	175	.81	(1)	(1)	14.3	10	35
7333	Galt	.....do	.....do	168	1.72	4.2	9.6	15.3	7	36
7367	Dundas	.....do	.....do	172	.93	3.6	11.2	15.4	11	33
7368	.....do	.....do	.....do	172	.65	3.8	10.4	15.9	13	68

[1] Test not made.

[2] Exact locality not known.